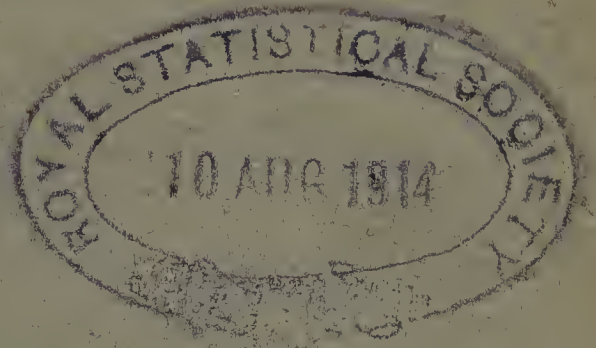




County Borough of Halifax
Health Department.

ANNUAL REPORT ON THE HEALTH OF THE BOROUGH

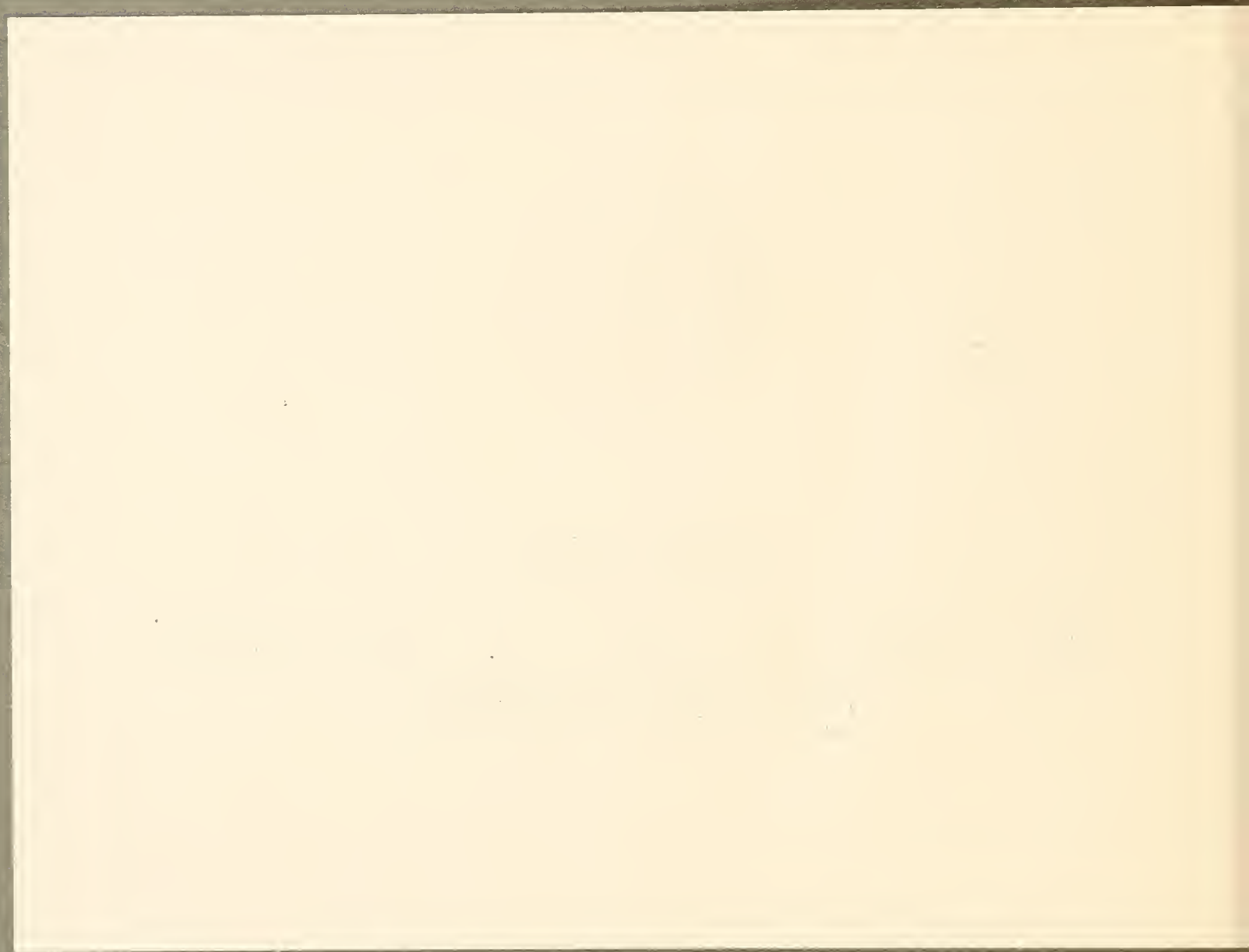
For the 52 weeks ended
December 27th, 1913.

Printed by Order of
the Health Committee.

Messrs. Edward Mortimer,
Printers, Regent Street,
Halifax. . : : 1914.



WITH THE
MEDICAL OFFICER OF HEALTH'S
COMPLIMENTS.





County Borough of Halifax
Health Department.

ANNUAL REPORT ON THE HEALTH OF THE BOROUGH

For the 52 weeks ended
December 27th, 1913.

Printed by Order of
the Health Committee.

Messrs. Edward Mortimer,
Printers, Regent Street,
Halifax. : : : 1914.

Staff of the Health Department.

JAS. T. NEECH, M.D., D.P.H.,

Medical Officer of Health, Superintendent of the Borough Fever
Hospital, and Chief Tuberculosis Officer.

D. M. TAYLOR, M.A., M.D., D.P.H.,

Assistant Medical Officer of Health, and Clinical Tuberculosis Officer.

J. A. DEWHIRST, F.I.C., F.C.S., Public Analyst.

DAVID TRAVIS, A.R.S.I., F.S.I.A.,

Chief Sanitary Inspector and Scavenging Superintendent.

J. POLLARD, M.R.C.V.S., D.V.S.M.,

Veterinary and Meat Inspector.

J. E. FIRTH.

R. PICKARD.

F. TEAL.

J. G. WALSHAW.

District Sanitary Inspectors.

T. FEARNLEY, Shops Inspector.

ALICE M. THOMPSON, C.M.B., Lady Health Visitor.

E. WILCOX, Tuberculosis Nurse.

R. TRAVIS., Assistant Scavenging Superintendent.

J. W. JACKSON, Chief Clerk.

CHARLES CARLTON.

HARRY LEAPER.

Assistant Clerks.

M. ROBISON, Matron of the Borough Hospital.

W. GUEST,

A. GREENWOOD,

Laundry Engineer and Disinfecter.

Porter.

Gour Department.

D. TYSON, Yard Foreman.

J. HEATH,

H. DAWRANT,

Goux Inspectors.

HARRY ASKE,

ERNEST W. SMITH,

Clerk.

Assistant Clerk.

Health Committee.

Mayor.

ALDERMAN WILLIAM HENRY INGHAM, J.P.

COUNCILLOR W. M. BRANSON, L.R.C.P., *Chairman*.

COUNCILLOR A. D. OATES, *Vice-Chairman*.

Alderman F. W. THOMSON, J.P. Counc. J. H. WADDINGTON.

„ J. F. COE, J.P. „ H. FARRAR.

„ G. T. RAMSDEN. „ J. BROADBENT.

„ A. TAYLOR, J.P. „ F. DENTON.

Councillor R. HODGSON. „ T. N. HELLIWELL.

„ J. REDMAN. „ C. H. SMITHSON.

Councillor J. HORSFIELD.

Sub-Committees

Appointed by the Health Committee.

Hospital Sub-Committee.

THE CHAIRMAN.

ALDERMAN COE.

VICE-CHAIRMAN.

„ RAMSDEN.

COUNCILLOR FARRAR.

„ TAYLOR.

COUNCILLOR HODGSON.

Cleansing Sub-Committee.

THE CHAIRMAN.

COUNCILLOR BROADBENT.

VICE-CHAIRMAN.

„ DENTON.

COUNCILLOR FARRAR.

„ HELLIWELL.

COUNCILLOR REDMAN.

Accounts Sub-Committee.

THE CHAIRMAN.

ALDERMAN WHITLEY THOMSON.

VICE-CHAIRMAN.

COUNCILLOR DENTON.

COUNCILLOR SMITHSON.

„ HELLIWELL.

COUNCILLOR HORSFIELD.

Buying Sub-Committee.

THE CHAIRMAN.

COUNCILLOR HODGSON.

VICE-CHAIRMAN.

„ DENTON.

COUNCILLOR REDMAN.

„ HORSFIELD.

Housing Sub-Committee.

THE CHAIRMAN.

ALDERMAN RAMSDEN.

VICE-CHAIRMAN.

COUNCILLOR HORSFIELD.

COUNCILLOR J. BROADBENT. „ WADDINGTON.

COUNCILLOR SMITHSON.

Diseases of Animals Act and Tuberculosis Order Sub-Committee.

THE MAYOR.

ALDERMAN RAMSDEN.

CHAIRMAN.

COUNCILLOR HODGSON.

VICE-CHAIRMAN.

„ HORSFIELD.

ALDERMAN COE.

COUNTY BOROUGH OF HALIFAX.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

JAS. T. NEECH, M.D., D.P.H.

FOR THE YEAR 1913.

INTRODUCTION.

*To the Chairman and Members of the Health
Committee.*

GENTLEMEN,

I now have the honour and the pleasure of presenting to you my 14th Annual Report, which is the 41st Annual Report on the health of the Borough, and covers the 52 weeks which ended on December 27th, 1913.

I consider the Report to be very satisfactory in many respects. There was a slight increase in both the marriage and birth-rates.

It is true the general death-rate showed a slight increase, but this is largely accounted for by the rise which occurred in the zymotic death-rate, the latter no doubt being due to the warm, dry summer of last year. This borough was not alone in this respect, as most of the large towns show similar increases.

The infantile death-rate was also considerably higher as a result of the same cause.

The notifiable infectious diseases were much less prevalent than usual. There were fewer cases of Scarlet Fever reported than had been the case for seven years

and the number of cases of Typhoid reported is the lowest on record. There was a slight reduction in the death-rate from consumption.

I am glad also to be able to report a diminution in the number of Goux closets in the borough, in fact this is the first year during my tenure of office that I have been able to record a diminution in the number of that class of sanitary convenience. I am looking forward, and expecting each year in the future, to be able to record a further and greater reduction in number of this form of closet, because from a sanitary point of view they are not to be compared with the water carriage system.

It is with regret that I have to record the death of Ernest B. Jubb, the junior Clerk in the office, which occurred early in the year. This was the only change in the staff during the year.

In conclusion I have to acknowledge the assistance rendered me by Dr. Taylor, Assistant Medical Officer of Health; Mr. Travis and the District Sanitary Inspectors, as well as Messrs. Jackson and Carlton, and to thank the Committee for its generous support during the year.

I am,

Gentlemen,

Your obedient servant,

Jas. J. Keck M.D. D.P.H.

MEDICAL OFFICER OF HEALTH.

TOWN HALL,

HALIFAX,

June 17th, 1914.

STATISTICAL SUMMARY.

	1913	1912
	ACRES	
Area of County Borough ...	13,984	
Rateable Value ...	£500,370	£495,040
Population, estimated to middle of 1913 ...	101,800	
Population, 1911 Census ...	101,556	
Persons per Acre ...	7·2	7·4
Average number of Persons per Inhabited House, 1911 Census...	3·92	...
Average number of Persons per House, 1911 Census ...	3·65	...
Birth Rate ...	18·3	18·0
„ Average for previous 10 years ...	19·0	19·7
Death Rate ...	16·0	15·5
„ Corrected for Institutions ...	15·3	14·7
Death Rate for seven principal Zymotic Diseases ...	·74	·49
Death Rate, the mean for previous 10 years of Zymotic Diseases ...	·97	1·0
Deaths of Infants under 1 year per 1000 Births ...	103	81
Illegitimate Births...	100	110
Average Age at Death, Males ...	44·0 years	46·3 years
Average Age at Death, Females ...	49·6 years	51·6 years
Latitude—North ...	50° 43'	...
Longitude—West ...	1° 52'	...
Height above Sea Level, feet...	625	...
Total Rainfall, inches ...	30·17	44·04

Area and Population of the Borough.

The Census of 1911 showed that there had been a considerable decrease in the population of the borough during the previous decade. I am of opinion however that this decrease has not continued since the last census. I estimated the population of the borough to be 101,800 in the middle of the year under review, and in doing so consider that if anything, this is an error on the right side, as there are now more houses occupied, and more burgesses on the burgess roll.

The number of burgesses in the borough for the year 1911 was 22,813, and the population as shown by the census, worked out at 4·4 persons per burgess. There were 23,310 burgesses in the year under review, and this number multiplied by 4·4 would give a population of 102,564.

In connection with the diminution of the population, as shown by the last census, the following table, gives the number of males and females living at each of the undermentioned age periods, at the 1901 and at the 1911 census respectively. The difference between these numbers may be of interest.

AGE PERIOD.	MALES.				FEMALES.			
	1901	1911	+	—	1901	1911	+	—
Under 5 years.	4911	4111		800	4992	4199		793
5 to 15	9404	8261		1143	9878	8590		1288
15 to 25	9632	8232		1400	11447	10037		1410
25 to 45	15043	14867		176	17714	18029	315	
45 to 65	7707	62857	1150		9737	10932	1195	
65 upward	1770	016	246		2701	3422	721	
Totals	48467	46344	1396	3519	56469	55209	2231	3491

From the above table it will be observed that there was a less number of males living in the above age periods at the 1911 census, while in the case of females it will be seen that there were 315 more living between the ages of 25 and 45 than during the previous census.

If the age period of from 25 to 45 years be divided into five-yearly periods, and the numbers living in each of those periods at the 1901 and 1911 censuses respectively, it is found that in the case of males, the population had diminished up to the age of 35 years, and beyond that age, there was an increase in each age period, while in the case of females it is found that the diminution in population ceased at 30 years, or five years earlier than the male population, and beyond that age as in the case of the male population there was an increase in each age period.

As stated in a former Annual Report, emigration has no doubt been the cause of the fall in the population of the borough, and the persons emigrated consisted of males below the age of 35, and of females below the age of 30 respectively.

No doubt many of the neighbouring towns, although they showed an increase in the population, have been affected by emigration, because I observe that in comparing the number living at the 1901 and 1911 censuses respectively, several of them show a diminution in population between the ages of 15 and 25.

From the above table it would appear that about an equal number of males and females emigrated or left the town, during the period between the two census years.

I may mention that there are in the borough 8860 more females than males, compared with 8000 at the 1901 census.

The area of the borough is now given as 13,984 acres, and is divided into 15 wards. The following table gives the acreage, and the estimated population of each ward, together with the number of houses built therein during the year under review.

WARDS				Population Estimated to Middle of 1913	Acreage	Persons per Acre	Number of Houses Built during 1913
Ovenden	...	...		6620	532	12·4	...
Akroydon	...	...		6125	582	10·5	1
North	...	...		7660	168	45·5	...
Central	...	...		7130	82	86·9	...
West	...	...		8500	86	98·8	...
South	...	...		7370	296	24·9	3
East	...	...		6100	191	31·9	...
Southowram	...	...		6970	789	8·8	14
Skircoat	...	...		10710	518	20·6	24
Copley	...	...		3065	548	5·5	...
Pellon	...	...		9000	241	37·3	2
Kingston	...	...		10110	238	42·4	1
Illingworth	...	...		6510	4804	1·3	9
Northowram	...	...		3150	1555	2·0	...
Warley	...	...		2780	3354	·8	...
Totals	...	...		101800	13984	...	54
Average	...	...		...	...	7·2	...

Marriages.

The number of marriages solemnised during the year shows a slight increase, being 1,078 compared with 1,045 during the previous year. This gives a marriage rate of 10·5 per 1,000, against 10·2 during the previous year, an increase of ·3 per 1,000.

The marriage rate for 1913 was slightly above the average of the past five years, and with the exception of the years 1910 and 1911 is the highest rate recorded since the year 1901.

The marriage rate of Halifax is remarkably low compared with many other large towns, and is very much below the average of England and Wales, as the following table will show.

YEAR	MARRIAGE RATE	
	Halifax	England & Wales
1897	15.9	16.0
1898	10.4	16.2
1899	12.3	16.5
1900	11.2	16.0
1901	10.5	15.9
1902	9.9	15.9
1903	9.7	15.8
1904	9.9	15.2
1905	10.1	15.2
1906	9.9	15.6
1907	10.4	15.7
1908	9.8	14.9
1909	9.6	14.5
1910	10.9	14.7
1911	10.5	15.1
1912	10.2	15.4
1913	10.5	15.5

From the above table it will be observed that we have to go back as far as 1897 to find a recorded marriage rate anything comparable to the average rate of the country generally.

In connection with this subject it may be of interest to mention that there are 4860 more females living in Halifax, between the ages of 16 and 45, than males.

The following table shows where the marriages were solemnised.

In Churches of Church of England	562
In Nonconformist places of Worship...	323
At Register Office	193
Total	1078

There has been a gradual increase in the number of marriages solemnised in nonconformist places of worship and the Registry Office during the past ten years, as the following table will show.

YEAR.	Church of England.	Nonconformist Places of Worship and Registry Office.
1904	625	414
1905	626	422
1906	615	413
1907	622	452
1908	566	449
1909	563	427
1910	655	475
1911	598	474
1912	574	471
1913	562	516

Births.

The number of births registered in Halifax during the year under review was 1876, but 7 of these belonged to outside districts. There also occurred 2 births outside the borough belonging thereto. By subtracting the former and adding the latter thereto, the number of births belonging to the borough for the year was 1871, or an increase of 43 when compared with the previous year.

This gives a birthrate for the year of 18·3 per 1000, which is the highest recorded birthrate since 1908, with the exception of 1911.

The following table gives the birthrates of the borough since the year 1904.

YEAR.	Birthrate per 1,000.
1904	20·7
1905	20·0
1906	20·0
1907	18·7
1908	20·6
1909	17·9
1910	18·2
1911	18·3
1912	18·0
1913	18·3

Of the registered births there were 915 males and 956 females.

The increased number of deaths during the year under review has caused a decrease in the excess of the number of births over deaths. The following table compares these figures for the past 13 years.

Year	Births	Deaths	Excess of Births over Deaths
1901	2351	1709	642
1902	2225	1634	591
1903	2248	1592	656
1904	2154	1643	511
1905	2072	1618	454
1906	2070	1674	396
1907	1927	1558	369
1908	2118	1561	557
1909	1840	1552	288
1910	1860	1431	429
1911	1868	1554	314
1912	1828	1495	333
1913	1871	1561	310
Average ...	2033	1583	450

The birthrate in the country generally has been gradually falling, but that of Halifax compares very unfavourably with the average of England and Wales, as the following table will show.

Period	England and Wales	Halifax	Difference
1875-9	35·3	35·7	+ 0·4
1880-4	33·8	30·7	— 3·1
1885-9	31·4	28·0	— 3·4
1890-4	30·7	25·4	— 5·3
1895-9	29·7	23·1	— 6·6
1900-4	28·4	21·7	— 6·7
1905-9	26·5	19·4	— 7·1
1910-3	24·2	18·2	— 6·0

There were 100 illegitimate births registered during the year, against 110 during the previous year, which is slightly above the average of the past five years.

The following table shows the number of illegitimate births registered during the past 41 years, and the rate per cent. these births bear to the total number of births registered.

Year.	Number of Illegitimate Births.	Rate per cent to whole Number of Births
		Average
1873	101	4·2
1874	123	5·0
1875	104	4·2
1876	121	4·4
1877	116	4·6
1878	No Record	
1879	108	4·6
1880	118	4·8
		4·5
1881	113	4·8
1882	105	4·6
1883	86	3·9
1884	130	5·7
1885	101	4·5
1886	90	3·9
1887	103	4·5
1888	96	4·2
		4·5
1889	99	4·5
1890	77	3·2
1891	51	2·3
1892	78	2·3
1893	73	3·2
1894	73	3·4
1895	51	2·3
1896	65	2·7
		2·9
1897	44	2·0
1898	58	2·6
1899	58	2·5
1900	75	3·2
1901	101	4·2
1902	89	4·0
1903	102	4·5
1904	113	5·2
		4·7
1905	97	4·6
1906	99	4·7
1907	84	4·3
1908	120	5·6
1909	83	4·5
1910	102	5·4
1911	81	4·3
1912	110	6·0
1913	100	5·3
		4·9

The average birthrate of the 96 great towns for 1913 was 25·1 per 1,000, and only 10 of these had a lower birthrate than Halifax, viz : Hornsey, 15·8 ; Ilford, 17·0 ; Hastings, 14·4 ; Eastbourne, 16·0 ; Bournemouth, 15·2 ; Bath, 15·8 ; Southport, 14·9 ; Blackpool, 16·5 ; Southend, 18·2 ; and Ealing, 17·8 per 1,000 respectively.

The birthrate of England and Wales for the year 1913 showed an increase of ·1 per 1,000 compared with the previous year.

The birthrates of the other Yorkshire great towns were : Leeds, 23·6 ; Sheffield, 28·2 ; Bradford, 19·7 ; Hull, 28·0 ; Huddersfield, 19·5 ; York, 23·9 ; and Rotherham, 30·3 per 1,000 respectively. Thus it will be observed that Halifax has a lower birthrate than any other of the great towns in Yorkshire.

The number of births and birthrates during each quarter of the year are shown in the following table.

Period	Males		Females		Totals		Birthrate per 1000 living	
	1913	1912	1913	1912	1913	1912	1913	1912
1st Quarter	222	232	236	235	458	467	17·9	18·4
2nd „	232	243	249	223	481	466	18·8	18·3
3rd „	242	214	230	231	472	445	18·5	17·5
4th „	219	225	241	225	460	450	18·0	17·7
Whole Years ...	915	914	956	914	1871	1828	18·3	18·0

The following table gives the birthrates of the different wards of the borough during the past five years.

WARDS	BIRTHRATES					
	1909	1910	1911	1912	1913	Average
Ovenden	17·6	18·5	20·4	17·1	18·7	18·4
Akroydon... ..	19·8	18·5	23·3	20·4	23·5	21·1
North	22·9	24·1	23·1	20·3	22·7	22·6
Central	20·9	20·7	20·8	18·7	24·4	21·1
West	16·4	18·4	14·9	18·8	18·7	17·4
South	13·6	12·2	13·0	11·6	17·5	13·5
East	15·8	13·2	14·9	16·4	16·8	15·4
Southowram ...	20·3	25·0	24·0	23·9	21·9	23·0
Skircoat	15·1	17·3	16·6	15·3	15·4	15·9
Copley	21·8	13·0	17·3	18·6	16·3	17·4
Pellon	14·6	15·3	18·0	18·2	15·4	16·3
Kingston	13·1	12·8	16·7	17·2	14·6	14·8
Illingworth ...	15·9	13·2	15·6	17·3	13·9	15·1
Northowram ...	15·5	20·0	21·3	22·3	19·3	19·6
Warley	19·1	15·1	19·6	27·4	20·5	20·3

From the above table it will be observed that the birthrates varied during 1913, from 13·9 in Illingworth, to 24·4 per 1,000 in Central Ward, while the average for five years varied between 13·5 per 1,000 in South, and 23·0 in Southowram Ward.

According to information furnished me by the sextons and caretakers of the various burial grounds, it appears there were 88 still-born children buried during the year, against 90 during the previous year. There were 58 still-births notified by the midwives against 56 during the previous year, or an increase of 2.

The number of still-born children buried in each of the burial grounds during the past two years is shown in the following table.

Name of Burial Ground	Number of Still-born Children Buried therein	
	1913	1912
Moor End Chapel	0	0
Nursery Lane Wesleyan	0	0
St. George's, Ovenden	0	0
Providence Chapel, Ovenden	0	1
Illingworth Church	3	1
Christ Church, Pellon	2	5
Illingworth Wesleyan Chapel	1	0
Mount Zion, Ovenden	2	2
Borough Cemetery	25	21
Wesleyan Chapel, Northowram	0	0
All Saints' Church	3	5
Heywood Cemetery	9	2
Bradshaw Church	0	0
Mount Tabor Burial Ground	0	0
King Cross Wesleyan	7	7
St. Paul's Church, King Cross	14	18
All Souls' Cemetery	10	10
Warley Church	4	1
Wesleyan Chapel, Luddenden	0	0
Lister Lane Cemetery	2	4
St. Thomas' Church	6	13
Totals	88	90

The total number buried during each of the previous eleven years was 1901, 108; 1902, 86; 1903, 118; 1904, 121; 1905, 113; 1906, 112; 1907, 113; 1908, 101; 1909, 104; 1910, 94; 1911, 93.

It would appear from these figures that the number of still-births is gradually declining.

Deaths.

The number of deaths registered in the borough during the year under review was 1637. Of these how-

ever, 132 which occurred in the various Institutions of the borough, did not belong to the district.

The following table gives the institutions in which these deaths occurred, and the district to which they belonged.

		Poor Law Hospital	Infirmary	Stoney Royd Hospital	Other Places
Middlesborough	...	2	...	...	...
Luddenden Foot	...	3	2	...	2
Greetland	...	3	5	...	...
Brighouse	...	17	2	...	2
Southowram	...	4	1	...	...
Sowerby Bridge	...	15	10	...	...
Sowerby	...	1	1	...	...
Wadsworth	...	...	2	...	...
Elland	...	8	3	1	...
Stainland	...	2	1	...	...
Queensbury	...	3	...	1	...
Dodworth	...	...	...	...	1
Keighley	...	...	1	...	...
Hartshead	...	1	...	...	...
Middleton	...	...	1	...	...
Hipperholme	...	3	...	...	...
Bradford	...	...	1	...	1
Leeds	...	1	...	...	...
Rishworth	...	1	...	...	...
Heptonstall	...	...	3	...	...
Denholme	...	...	...	...	1
Clifton	...	3	...	...	...
Shelf	...	1	...	...	1
Rochdale	...	...	1	...	...
Salford	...	...	1	...	1
Soyland	...	1	...	...	...
Hebden Bridge	...	...	7	...	...
Todmorden	...	...	4	...	...
Norland	...	1	...	...	...
Manchester	...	1	...	...	1
Blackshaw	...	...	1	...	...
Midgley	...	...	1	...	...
Barkisland	...	...	1	...	...
Totals	...	71	49	2	10

By virtue of the arrangement made by the Registrar General, we have now a complete list of deaths of

persons belonging to the borough, which occur in outside districts. The number of such deaths received during the year from the Registrar General was 56 against 46 for the previous year.

The following table shows where these deaths occurred.

Where Death occurred			Number
West Riding Asylums	...		36
Sowerby Bridge	...	...	2
Morecambe	...	...	1
Bradford	...	...	2
Leeds	...	...	4
St. Pancras	...	...	1
Oakworth	...	...	1
Skipton	...	...	1
Huddersfield	...	...	1
Greetland	...	...	1
Thornton	...	...	1
Liverpool	...	...	1
Sheffield	...	...	1
Barrow-in-Furness	...	...	1
Keighley	...	...	1
Hemsworth	...	...	1
Total			56

In the necessary adjustment made by excluding the deaths which occurred in the borough not belonging thereto, and including the above, the corrected number of deaths for the year under review was 1561, against 1495 during the previous year.

Of the above deaths, 786 were males, and 775 females, which gives a deathrate for the year of 15.3 per 1,000, which is an increase in that rate of .6 per 1,000 when compared with that of the previous year.

In consequence of the variation in the age and sex distribution of the population in different towns, and in different parts of the country, the Registrar General supplies a factor for the purpose of correcting local deathrates for age and sex constitution. The factor for

the borough of Halifax is 1,0239, and by multiplying our deathrate by this factor, it is increased from 15·3 to 15·6 per 1,000.

The following table shows the deathrates of the borough during the past 14 years.

Period	Deathrate
1900	18·1
1901	16·2
1902	15·6
1903	15·2
1904	15·8
1905	15·6
1906	16·2
1907	15·1
1908	15·2
1909	15·1
1910	14·0
1911	15·3
1912	14·7
1913	15·3

From the above table it will be observed that the deathrate of the borough for the year under review, is the highest recorded for the past seven years, with the exception of 1911.

The deathrate of the borough is 1·0 per 1,000 above the average of the 96 great towns, of which 65 have a lower deathrate, but of the latter 37 have a smaller population.

The deathrates of the other Yorkshire great towns were as follows: —Leeds, 15·4; Sheffield, 15·7; Bradford, 14·9; Hull, 14·8; Huddersfield, 14·4; York, 12·4; and Rotherham, 15·0 per 1,000 respectively.

The following table shows the average deathrate of England and Wales for the undermentioned periods and compares it with that of Halifax.

Period	Deathrates	
	Halifax	England and Wales
1876-80	23·5	20·9
1881-5	21·1	19·4
1886-90	21·2	18·9
1891-5	17·9	18·7
1896-00	17·5	17·7
1901-5	15·6	16·0
1906-10	15·1	14·6
1911-13	15·1	13·7

The deathrates of the different wards varies from 10·4 in Warley, to 22·9 in East Ward. This variation is shown in the following table, which also gives the density of population in the various wards.

WARDS	Population	Acreage	Persons per Acre	Total Deaths	Death- rate per 1000
Ovenden	6620	532	12·4	105	15·8
Akroydon	6125	582	10·5	93	15·1
North	7660	168	45·5	129	16·8
Central	7130	82	86·9	145	20·3
West	8500	86	98·8	145	17·0
South	7370	296	24·9	116	15·7
East	6100	191	31·9	140	22·9
Southowram ...	6970	789	8·8	113	16·2
Skircoat	10710	518	20·6	132	12·3
Copley	3065	548	5·5	46	15·0
Pellon	9000	241	37·3	109	12·1
Kingston	10110	238	42·4	120	11·8
Illingworth ...	6510	4804	1·3	94	14·4
Northowram ...	3150	1555	2·0	45	14·2
Warley	2780	3354	·8	29	10·4
Totals	101800	13984	7·2	1561	15·3

The following table gives the average general death-rate of each ward of the borough for a period of five years, from which it will be observed that East Ward, as usual, has the highest average deathrate, while that of Skircoat was the lowest, being only 10·9 per 1,000.

WARDS		DEATHRATES					
		1909	1910	1911	1912	1913	Average
Ovenden	...	14·6	15·4	15·4	13·3	15·8	14·9
Akroydon	...	16·9	12·0	17·9	16·1	15·1	15·6
North	...	18·1	18·4	17·3	16·8	16·8	17·4
Central	...	17·8	14·6	17·4	16·6	20·3	17·3
West	...	15·4	14·8	16·0	16·2	17·0	15·8
South	...	15·1	14·6	14·9	12·2	15·7	14·5
East	...	17·1	21·0	20·7	19·7	22·9	20·2
Southowram	...	13·9	13·7	17·3	15·1	16·2	15·2
Skircoat	...	10·8	8·8	10·9	12·1	12·3	10·9
Copley	...	6·5	11·8	12·4	9·8	15·0	11·1
Pellon	...	11·2	11·8	12·4	12·8	12·1	12·0
Kingston	...	13·8	9·7	12·5	14·7	11·8	12·5
Illingworth	...	14·4	10·8	17·0	16·5	14·4	14·6
Northowram	...	14·9	12·0	15·6	11·7	14·2	13·6
Warley	...	12·7	9·4	14·1	14·5	10·4	12·2

The following table shows the total number of deaths of each sex which occurred in the borough, the total ages lived, and the average age at death during the past 18 years.

MALES				FEMALES			
	Deaths	Total Years	Average Ages		Deaths	Total Years	Average Ages
0-1	116	116	...	0-1	77	77	...
1-2	32	44	1·3	1-2	16	18	1·1
2-5	14	40	2·8	2-5	21	61	2·9
5-15	28	265	9·4	5-15	28	239	8·5
15-25	28	549	19·6	15-25	31	606	19·5
25-45	93	3325	35·7	25-45	87	3059	35·1
45-65	245	13572	55·3	45-65	211	11852	56·1
65 and upwards	230	16740	72·7	65 and upwards	304	22589	74·3
Total 1913.	786	34651	44·0	Total... 1913.	775	38501	49·6
1912	Average		46·3	1912	Average		51·6
1911	,,		42·2	1911	,,		45·6
1910	,,		42·3	1910	,,		47·1
1909	,,		42·0	1909	,,		47·3
1908	,,		40·6	1908	,,		44·8
1907	,,		41·4	1907	,,		47·8
1906	,,		39·0	1906	,,		44·9
1905	,,		38·6	1905	,,		44·1
1904	,,		37·5	1904	,,		41·2
1903	,,		40·0	1903	,,		43·3
1902	,,		36·6	1902	,,		40·2
1901	,,		36·2	1901	,,		40·1
1900	,,		38·3	1900	,,		41·2
1899	,,		35·1	1899	,,		38·4
1898	,,		34·4	1898	,,		38·2
1897	,,		35·3	1897	,,		37·9
1896	,,		35·5	1896	,,		38·4

Zymotic Deathrate.

The number of deaths from the seven principal zymotic diseases, including deaths from diarrhoea and enteritis under two years of age, for the year 1913, was 76 against 50 during the previous year. This gives a deathrate of $\cdot 74$ per 1,000, against $\cdot 49$ for the previous year.

This increase was due to a larger number of deaths from diphtheria, and diarrhoea and enteritis. Under the latter heading, no less than 25 more deaths occurred, due no doubt to the warm dry summer.

The zymotic deathrate of the other Yorkshire great towns, including diarrhoea and enteritis under two years of age, was :—Leeds, 1·42, ; Sheffield, 2·13 ; Bradford, 1·02 ; Huddersfield, $\cdot 81$; Hull, 1·74 ; York, $\cdot 73$; and Rotherham, 1·80 per 1,000 respectively, all of which except York, had a considerably higher zymotic deathrate than Halifax.

The following table compares the deathrates from the principal zymotic diseases during 1913 in England and Wales, and Halifax.

	DEATHRATE FROM						
	Small-pox	Measles	Scarlet Fever	Diphtheria	Whooping Cough	Fever	Diarrhoea and Enteritis (under 2 years of age)
England and Wales...	$\cdot 00$	28	$\cdot 06$	$\cdot 12$	$\cdot 14$	$\cdot 04$	23·41
96 Great Towns ...	$\cdot 00$	$\cdot 34$	$\cdot 07$	$\cdot 13$	$\cdot 17$	$\cdot 04$	29·33
145 Smaller Towns ...	$\cdot 00$	$\cdot 30$	$\cdot 05$	$\cdot 11$	$\cdot 13$	$\cdot 05$	24·73
England and Wales, less the 241 towns...	$\cdot 00$	$\cdot 20$	$\cdot 05$	$\cdot 11$	$\cdot 12$	$\cdot 04$	14·39
HALIFAX ...	$\cdot 00$	$\cdot 08$	$\cdot 009$	$\cdot 19$	$\cdot 04$	$\cdot 06$	18·17

In the above table, the death-rate from diarrhoea and enteritis in persons below two years of age, is

calculated, not upon the basis of population, but like the infant deathrate, upon the number of children born, in accordance with the practice of the Registrar General.

The following table gives the number of zymotic deaths, and the deathrate of each ward, during the year under review.

WARDS	Small-pox	Measles	Scarlet Fever	Diphtheria	Whooping Cough	Fever	Diarrhoea and Enteritis (under 5 years)	Zymotic Death-rate per 1000
Ovenden ...	...	...	...	2	1	...	1	·60
Akroydon ...	...	...	...	...	1	...	3	·65
North ...	...	...	...	1	1	...	6	1·04
Central ...	...	1	...	...	...	1	9	1·54
West ...	...	2	...	2	...	...	5	1·05
South ...	...	...	...	1	...	...	...	·13
East ...	...	...	...	...	...	...	1	·16
Southowram ...	...	1	...	5	1	2	5	2·00
Skircoat ...	...	2	1	5	...	1	2	1·02
Copley ...	...	...	...	...	...	...	...	·00
Pellon ...	...	2	...	2	1	1	...	·66
Kingston ...	...	...	...	2	...	1	1	·39
Illingworth ...	...	...	...	...	...	1	...	·15
Northowram ...	...	1	...	...	...	...	1	·63
Warley ...	...	...	...	...	...	...	...	·00
Totals ...	...	9	1	20	5	7	34	avg·74

The above table shows that Southowram had the highest zymotic deathrate, viz : 2·0 per 1,000, while in Copley and Warley, not a single zymotic death occurred during the year.

The following table gives the zymotic deathrates of the various wards during the past five years, together with the average for each ward.

WARDS	ZYMOTIC DEATHRATE					
	1909	1910	1911	1912	1913	Average
Ovenden ...	0·6	2·1	1·2	0·3	0·6	0·9
Akroydon ...	2·6	0·4	2·6	0·8	0·6	1·4
North ...	1·6	1·4	2·2	0·6	1·0	1·3
Central ...	0·4	1·0	1·5	0·5	1·5	0·9
West ...	0·8	0·4	2·7	0·4	1·0	1·0
South ...	0·1	0·4	0·9	0·0	0·1	0·3
East ...	0·8	1·0	1·2	0·6	0·1	0·7
Southowram ...	1·2	0·6	2·5	1·2	2·0	1·5
Skircoat ...	0·5	0·1	0·8	·09	1·0	0·4
Copley ...	0·0	1·2	0·9	0·0	0·0	0·4
Pellon ...	0·2	0·4	0·4	0·4	0·6	0·4
Kingston ...	0·6	0·5	0·6	0·3	0·3	0·4
Illingworth ...	0·4	0·0	0·9	0·9	0·1	0·4
Northowram ...	0·2	0·8	0·9	0·0	0·6	0·5
Warley ...	0·6	0·0	1·4	0·7	0·0	0·5

Infantile Mortality.

The following table gives the infantile deathrate per 1,000 births during the past ten years.

Year.	Infant Mortality.
1904	130
1905	130
1906	116
1907	102
1908	101
1909	99
1910	89
1911	123
1912	81
1913	103

During the year under review there died 193 infants under one year of age, against 149 during the previous year, which, as the above table shows, gives an infant mortality of 103 deaths per 1,000 births. This is considerably above the previous year, but below that of 1911. Undoubtedly this increase in the infantile death-rate was due to the warm dry summer of last year.

The average infant deathrates of the different wards varies considerably, e.g. in Northowram, South, and Skircoat, the infant deathrates were 69, 52, and 53, respectively per 1,000 born, whilst in East, North, and Central, the average for five years was as high as 174, 148, and 145 respectively.

The following table gives the number of births, birthrates, the number of deaths of infants, and the mortality per 1,000 births, for each ward of the borough.

WARDS	Number of Births	Birthrates	Number of Deaths under 1 year	Mortality per 1000 Births
Ovenden ...	124	18·7	19	153
Akroydon ...	144	23·5	8	55
North ...	174	22·7	27	155
Central ...	174	24·4	26	149
West ...	159	18·7	15	94
South ...	129	17·5	7	54
East ...	103	16·8	21	203
Southowram ...	153	21·9	21	137
Skircoat ...	165	15·4	12	72
Copley ...	50	16·3	5	100
Pellon ...	139	15·4	11	79
Kingston ...	148	14·6	6	40
Illingworth ...	91	13·9	6	65
Northowram ...	61	19·3	6	98
Warley ...	57	20·5	3	52
Totals ...	1871	18·3	193	103

The following table shows the causes of death of infants under one year of age for the period under review.

CAUSE OF DEATH.			Under 1 Week	1-2 Weeks
All Causes.	{	Certified	55	15
		Uncertified	2	...
Common Infectious Diseases.	{	Small-pox	...	...
		Chicken-pox	...	...
		Measles	...	...
		Scarlet Fever	...	...
		Diphtheria (including Membranous Croup)	...	...
Diarrhœal Diseases.	{	Whooping Cough	...	...
		Diarrhœa, all forms	...	...
Tuberculous Diseases.	{	Enteritis	...	1
		Tuberculous Meningitis	...	...
		Tuberculous Peritonitis : Tabes Mesenterica	...	...
		Other Tuberculous Diseases	...	...
Wasting Diseases.	{	Congenital Malformations	5	...
		Premature Birth	32	5
		Atrophy, Debility, Marasmus	7	3
		Atelectasis	4	...
		Injury at Birth	3	...
Other Causes.	{	Erysipelas	...	...
		Syphilis	...	...
		Rickets..... ..	...	...
		Meningitis (<i>not Tuberculous</i>)	...	...
		Convulsions	1	1
		Gastritis	...	...
		Laryngitis	...	...
		Bronchitis	...	1
		Pneumonia (all forms)	...	1
		Suffocation, overlying	...	...
		Other causes	5	3
			57	15

Under the heading of Atrophy, Debility, and Marasmus, five more deaths occurred than during the previous year. It is so far satisfactory however, that the number of deaths under this heading are considerably below the numbers recorded a few years ago.

The number of illegitimate births registered was 100, and of these, 15 died during the year, under one year of age. This gives an infant mortality of 150 per 1,000 which is very high, and compares unfavourably with that of the previous year, when the deathrate was 118.

The following table shows the causes of death of the illegitimate infants.

Disease	Age at Death Under 1 year
Status Lymphaticus ...	1
Marasmus	3
Croupous Pneumonia...	1
Placenta Prævia ...	1
Atelectasis	1
Broncho Pneumonia ...	3
Gastro Enteritis	1 ...
Infantile Diarrhœa ...	1
Syphilis	2
Bronchitis	1

The following table shows the infant mortality and the birthrates of each ward during the past five years.

WARDS	Deaths under 1 Year to 1000 Births Registered						Average Birthrate during the past five years
	1909	1910	1911	1912	1913	Average	
Ovenden ...	106	57	103	97	153	103	18·4
Akroydon ...	120	39	77	88	55	75	21·1
North ...	127	149	193	116	155	148	22·6
Central ...	114	111	209	142	149	145	21·1
West ...	121	88	173	68	94	108	17·4
South ...	69	54	52	34	54	52	13·5
East ..	126	220	184	138	203	174	15·4
Southowram	108	102	149	66	137	112	23·0
Skircoat ...	66	35	44	48	72	53	15·9
Copley ...	57	93	94	35	100	75	17·4
Pellon ...	61	54	111	79	79	76	16·3
Kingston ...	125	111	112	74	40	92	14·8
Illingworth	87	50	117	79	65	79	15·1
Northowram	76	58	59	57	98	69	19·6
Warley ...	52	177	111	41	52	86	20·3

The following table shows the number of deaths which took place in the borough from some of the chief infantile diseases, and gives the deathrates therefrom of each disease per 1,000 of the population.

DISEASES	Number of Deaths under 1 year					Rate per 1000 of Population				
	1909	1910	1911	1912	1913	1909	1910	1911	1912	1913
From all causes ...	183	166	231	149	193	1·69	1·53	2·27	1·46	1·89
Respirat'ry Diseases	21	23	39	27	30	·19	·21	·38	·26	·29
Premature Birth ...	37	45	44	42	49	·34	·41	·43	·41	·48
Diarrhoea and Enteritis	5	5	45	8	26	·04	·04	·44	·07	·25
Whooping Cough	6	8	9	2	4	·05	·07	·08	·01	·03
Convulsions ...	20	6	10	6	7	·18	·05	·09	·05	·06
Scrofula, Tuberculosis ...	6	7	9	5	5	·05	·06	·08	·04	·04
Measles ...	1	2	2	2	...	·009	·01	·01	·01	·00

From the above table it will be observed that Premature Birth is one of the most important factors in connection with the deathrate of infants under one year of age, in fact, this cause during the year under review accounts for one-fourth of the infantile deathrate.

The following table gives the mortality from this cause, per 1,000 born, during the past 20 years.

Year	Number of Deaths	Mortality per 1,000 Births	Average
1894	64	30	30
1895	95	43	
1896	68	29	
1897	50	23	
1898	60	27	
1899	75	33	26
1900	51	22	
1901	47	19	
1902	79	35	
1903	50	22	
1904	59	27	21
1905	62	29	
1906	39	18	
1907	33	17	
1908	36	16	
1909	37	20	23
1910	45	24	
1911	44	23	
1912	42	22	
1913	49	26	

From the above table it will be observed that the average for the past five years shows a slight increase when compared with the average of the previous five years, but in comparison with the average of the past twenty years, a satisfactory decline is shown.

The following table serves to compare the average infant mortality of England and Wales, the great

towns, &c., with that of Halifax during the past two years.

	Deaths under 1 year per 1000 Births	
	1912	1913
England and Wales	95	109
96 Great Towns	101	117
145 Smaller Towns	98	112
England and Wales less the 241 Towns	86	96
HALIFAX	81	103

The infant mortality of the other Yorkshire great towns was as follows :—Leeds, 134 ; Sheffield, 128 ; Bradford, 127 ; Hull, 128 ; Huddersfield, 103 ; York, 93 ; and Rotherham, 141 respectively, all showing increases with the exception of the City of York.

The following compares the average infant mortality in quinquennial periods, from 1875 to the present time, of the borough, with that of England and Wales.

Period	Halifax	England and Wales
1875-9	173	145
1880-4	161	141
1885-9	158	142
1890-4	163	148
1895-9	154	157
1900-4	132	143
1905-9	109	121
1910-13	99	110

The following table shows the average infant mortality of 36 of the largest towns of the Country, having a population of 100,000 and upwards, and it will be seen that only two have a lower average than Halifax, viz : Southampton and Croydon.

36 Large Towns	Deaths under 1 year to 1,000 Births Registered.					
	1909	1910	1911	1912	1913	Average
Burnley ...	156	168	210	145	171	170
Preston ...	136	158	172	123	159	149
Middlesbrough	158	144	169	125	130	145
Blackburn ...	126	136	188	118	148	143
Rhondda ...	129	136	164	128	139	139
Liverpool ...	144	140	154	125	134	139
Stockport ...	132	137	170	107	145	138
Nottingham ...	150	128	162	117	130	137
Salford ...	141	130	149	128	136	136
Manchester ...	134	131	154	121	127	133
Birmingham ...	134	130	164	112	129	133
Oldham ...	119	127	160	117	140	132
Sunderland ...	135	129	151	115	134	132
Bolton ...	128	117	163	98	144	130
Leeds ...	122	132	158	101	134	129
Hull ...	114	135	155	101	128	126
Gateshead ...	112	151	136	103	122	124
South Shields ...	137	113	147	106	118	124
Plymouth ...	131	114	145	107	125	124
Sheffield ...	118	127	140	106	128	123
Leicester ...	127	126	132	110	120	123
Bradford ...	116	127	138	99	127	121
Birkenhead ...	123	135	134	97	116	121
Newcastle ...	119	121	136	101	121	119
Wolverhampton	138	107	135	88	130	119
Norwich ...	119	103	135	104	114	115
Cardiff ...	103	111	135	110	115	114
Bristol ...	100	90	141	103	96	106
London ...	107	102	128	90	105	106
Huddersfield ...	95	99	132	96	103	105
Derby ...	123	85	123	79	101	102
Portsmouth ...	96	104	126	82	90	99
Brighton ...	96	109	98	76	117	99
HALIFAX ...	99	89	123	81	103	99
Southampton ...	106	79	134	85	82	97
Croydon ...	80	88	106	76	94	88

Comparison of Ward Deathrates.

The following table compares the undermentioned deathrates of the different wards of the borough for the year 1913.

WARDS	General Deathrates	Zymotic Deathrates	Respiratory Deathrates	Phthisis Deathrates	Infantile Mortality
Ovenden ...	15·8	·6	3·0	·7	153
Akroydon ...	15·1	·6	2·9	·4	55
North ...	16·8	1·0	2·2	1·5	155
Central ...	20·3	1·5	4·7	1·1	149
West ...	17·0	1·0	2·5	1·4	94
South ...	15·7	·1	3·1	1·0	54
East ...	22·9	·1	3·1	2·2	203
Southowram ...	16·2	2·0	2·2	1·4	137
Skircoat ...	12·3	1·0	1·4	·5	72
Copley ...	15·0	·0	3·9	·3	100
Pellon ...	12·1	·6	2·1	·8	79
Kingston ...	11·8	·3	1·8	·2	40
Illingworth ...	14·4	·1	2·9	1·2	65
Northowram ...	14·2	·6	1·2	·6	98
Warley ...	10·4	·0	2·5	·7	52
Average ...	15·3	·7	2·6	1·0	103

The following table gives the average deathrates from the undermentioned causes for the past ten years in each ward,

WARDS	Average Deathrate, 10 years			
	General	Zymotic	Phthisis	Respiratory
Ovenden	14·8	1·1	·9	2·3
Akroydon	16·0	1·3	·7	2·4
North	17·5	1·5	1·4	3·1
Central	17·1	·7	1·3	3·3
West	15·3	·7	1·2	2·6
South	14·5	·5	·7	2·4
East	20·3	·9	2·0	3·6
Southowram... ..	15·0	1·4	1·1	2·4
Skircoat	12·2	·4	·9	2·0
Copley	12·1	1·0	·8	2·0
Pellon	12·0	·6	·8	1·8
Kingston	12·0	·4	·8	2·0
Illingworth	14·7	·5	·9	2·7
Northowram... ..	14·3	·9	1·2	2·0
Warley	13·7	·4	1·2	2·1

It will be observed that East Ward has the highest average deathrates in all cases except that from zymotic disease.

The ten years average deathrate of the borough was 15·3 per 1,000, consequently as will be observed from the above table, four wards have a higher average rate than that of the borough.

The following table serves to compare the death-rates from some of the chief diseases of the three wards

having respectively the highest and lowest deathrates during the past five years.

WARDS	Average Deathrate per 1000 for 5 years, 1909 to 1913						Total of Average
	Zymotic Diseases	Respiratory Diseases	Phthisis	Heart Diseases	Diseases Brain and Nervous System	Other Tubercular Diseases	
Copley ..	·4	2·1	·5	1·1	·9	·2	5·2
Warley ...	·5	1·5	·9	·9	1·3	·1	5·2
Pellon ...	·5	1·5	·6	1·1	1·5	·1	5·3
Average ...	·4	1·7	·6	1·0	1·2	·1	...
East ...	·8	3·7	1·9	2·2	1·5	·3	10·4
North ...	1·3	2·8	1·5	1·6	1·5	·3	9·0
Central ...	·9	3·6	1·1	1·5	1·5	·3	8·9
Average ...	1·0	3·3	1·5	1·7	1·5	·3	...

Notification of Infectious Diseases.

Powers for the compulsory notification of infectious diseases, occurring within the borough, were obtained in a local act in the year 1882.

It is satisfactory to note that notifiable infectious disease was less prevalent in the borough than during the previous year. There were 298 cases notified, against a total of 340 during the previous year, in fact, fewer cases of infectious disease were reported than during any year since 1896.

The following table shows the total number of cases notified and the distribution of those cases among the wards of the borough, and institutions situated therein.

WARDS	Polio Myelitis	Cerebro-Spinal Fever.	Typhoid Fever	Scarlet Fever	Puerperal Fever	Diphtheria	Erysipelas	Total
Ovenden	...	...	1	5	...	7	4	17
Akroydon	...	1	...	15	1	2	3	22
North ...	...	...	...	3	...	2	12	17
Central...	...	...	...	5	1	3	2	11
West ...	...	...	2	6	...	13	7	28
South ...	...	...	1	14	...	3	2	20
East ...	...	...	1	3	...	1	4	9
Southowram	...	...	4	4	1	24	3	36
Skircoat	...	...	2	8	...	28	5	43
Copley ...	...	...	...	7	...	1	1	9
Pellon ...	...	...	2	7	...	5	5	19
Kingston	...	...	1	21	...	21	6	50
Illingworth	...	...	1	2	...	1	2	6
Northowram	...	...	1	2	...	...	...	3
Warley ..	...	...	...	7	...	...	1	8
Total, 1912	1	1	16	109	3	111	57	298

PUBLIC INSTITUTIONS (which are included in the above).

Royal Infirmary...	...	...	1	6	...	4	4	15
Poor Law Hospital	...	...	1		...	...	9	10

The usual custom of intimating bi-weekly, to the Chief Librarian, the names and addresses of persons notified as suffering from infectious disease has been carried out during the year, and all books found in in-

fectured houses have been disinfected before being returned to the libraries.

The following table shows the number of cases of each disease notified during each month of the year under review.

MONTH			Poliomy- elitis	Cerebro- spinal Fever.	Typhoid Fever	Scarlet Fever	Puerperal Fever	Diphtheria	Erysipelas	Total
January	...	...	...	...	3	11	...	8	1	23
February	...	...	...	...	2	5	...	10	3	20
March	...	...	...	...	1	9	...	7	7	24
April	...	...	...	...	1	9	1	2	3	16
May	...	...	...	...	...	14	...	2	4	20
June	...	...	...	1	1	9	...	3	4	18
July	...	...	...	...	2	10	1	6	9	28
August	...	...	...	...	...	11	...	8	4	23
September	...	...	...	...	...	14	...	13	3	30
October	...	...	...	...	1	9	...	12	8	30
November	...	...	1	...	1	5	1	19	9	36
December	...	...	...	...	4	3	...	21	2	30
Totals	...	...	1	1	16	109	3	111	57	298

From the above table it will be observed that diphtheria was present in the borough throughout the year, but most prevalent during the last four months thereof, in fact, nearly 50 per cent. of the cases notified were reported during the fourth quarter.

The following table shows the number of cases of each disease notified yearly since the year 1883.

YEAR	Small-pox	Cholera	Typhus Fever	Enteric Fever	Scarlet Fever	Continued Fever	Puerperal Fever	Relapsed Fever	Diphtheria	Erysipelas	Chicken-Pox	Membranous Croup	Polio Myelitis	Cerebro-Spinal Fever	Total	Rate percentage of population
1883	2	...	2	108	158	43	2	1	14	...	...	...	...	...	330	·43
1884	1	...	1	69	269	24	4	4	13	...	...	...	...	...	385	·50
1885	7	...	1	56	214	22	1	...	25	...	...	...	...	...	326	·42
1886	3	1	...	57	124	7	5	...	59	...	...	...	...	...	256	·32
1887	...	...	1	66	727	8	7	...	26	...	...	...	...	...	836	1·05
1888	1	...	1	36	440	16	1	...	29	...	...	...	...	...	524	·65
1889	2	...	...	94	153	18	1	3	31	...	...	...	...	...	302	37
1890	...	...	...	67	328	8	8	1	62	...	...	...	...	...	474	·58
1891	...	1	...	99	429	14	5	2	23	...	...	...	...	...	573	·68
1892	159	...	1	56	256	9	4	2	71	...	...	...	...	...	558	·66
1893	346	5	...	69	150	5	6	...	57	...	...	...	...	...	638	·69
1894	16	...	...	52	114	3	6	...	43	...	...	...	...	...	234	·25
1895	..	...	...	58	52	3	4	...	29	...	...	...	...	...	146	·15
1896	..	...	...	105	44	2	4	..	37	...	...	...	...	...	192	·20
1897	..	...	...	78	476	1	8	...	67	...	...	...	...	...	630	·66
1898	...	...	...	79	626	1	9	...	23	...	...	...	...	...	738	76
1899	...	...	...	92	762	2	3	...	58	...	...	...	...	...	917	·93
1900	2	...	5	79	330	1	4	3	41	1	..	...	..	...	466	·46
1901	3	...	...	67	736	...	1	...	61	15	..	...	...	...	883	·83
1902	1	..	...	65	452	1	3	...	37	27	...	...	...	...	586	·56
1903	130	...	...	61	320	2	1	...	50	81	328	1	..	...	974	93
1904	80	...	...	47	486	...	9	...	80	73	...	...	...	...	775	·74
1905	49	...	...	50	338	...	6	...	87	54	...	...	...	...	584	·56
1906	...	...	...	38	214	...	7	...	158	56	...	...	...	...	473	·45
1907	...	...	...	60	89	...	7	...	118	36	...	...	...	...	310	·30
1908	...	...	...	53	186	1	6	...	72	44	...	...	..	...	362	·35
1909	...	...	...	44	515	...	4	...	128	45	...	...	...	...	766	·74
1910	..	...	...	33	237	...	7	...	137	50	...	...	...	...	464	·45
1911	..	...	1	35	287	1	2	..	110	65	..	...	...	...	501	·49
1912	...	...	...	35	176	...	1	...	81	46	...	...	1	...	340	·33
1913	...	...	...	16	109	...	3	...	111	57	...	...	1	1	298	·29

The above table shows what a satisfactory decline has taken place in the prevalence of typhoid fever within the borough, the number of cases notified during the year under review being less than half the previous lowest record.

Scarlet fever was also much less prevalent, while diphtheria shows an increase.

The following table shows the average number of notifications of the chief notifiable diseases in each ward of the borough during the past ten years, and gives the average attack rate per 1,000 of the population.

Wards	Averages, 10 years—1902 to 1911							
	Notifications					Total Average of Notifi- cations	Average Popu- lation	Average attack rate per 1000 population per annum
	Small- pox	Typhoid	Scarlet Fever	Puer- peral Fever	Diph- theria			
Ovenden ...	·7	1·1	34·2	·2	12·4	48·6	6725	7·2
Akroydon ...	·0	2·4	23·6	·4	7·5	33·9	6209	5·4
North ...	·5	3·0	21·5	·9	5·0	30·9	7766	3·9
Central ...	3·1	3·2	14·1	·7	4·9	26·0	7307	3·5
West ...	1·8	3·8	21·6	·3	8·9	36·4	8712	4·1
South ...	·3	2·9	15·6	...	6·8	25·6	7427	3·4
East ...	1·6	2·4	12·1	·6	4·6	21·3	7182	2·9
Southowram ...	·5	4·6	16·9	·5	9·4	31·9	7080	4·5
Skircoat ...	1·4	6·0	22·1	·3	14·5	44·3	10161	4·3
Copley ...	·0	1·0	9·6	·2	3·5	14·3	3017	4·7
Pellon ...	·7	2·4	21·5	·4	9·5	34·5	9014	3·8
Kingston ...	·4	3·3	21·7	·5	11·5	37·4	10089	3·7
Illingworth ..	1·1	2·8	13·5	·1	4·5	22·0	7062	3·1
Northowram ...	...	·9	12·4	·1	1·6	15·0	3173	4·7
Warley ..	·8	1·3	6·4	...	3·6	12·1	2777	4·3

Ovenden ward still has the highest average attack rate, while strange to say, East ward, where the general deathrate is the highest in the borough, enjoys the lowest attack rate from infectious diseases.

Causes of Death.

The following table serves to classify the causes of death in the borough, of persons belonging thereto, during 1913.

CAUSES OF DEATH						Number
Whooping Cough ...	...	...	...	...	...	5
Measles ...	...	...	...	...	...	9
Scarlet Fever ...	...	...	...	...	...	1
Diphtheria and Membranous Croup	...	...	...	...	...	20
Diarrhœa ...	...	...	...	...	...	27
Typhoid Fever ...	...	...	...	...	...	7
Epidemic Influenza ...	...	...	...	...	...	8
Enteritis ...	...	...	...	...	...	23
Erysipelas ...	...	...	...	...	...	2
Other Septic Diseases ...	...	...	...	...	...	1
Phthisis ...	...	...	...	...	...	102
Other Tuberculous Diseases ...	...	...	...	...	...	27
Cancer, Malignant Diseases ...	...	...	...	...	...	143
Bronchitis ...	...	...	...	...	...	147
Pneumonia ...	...	...	...	...	...	113
Pleurisy ...	...	...	...	...	...	5
Other Diseases, Respiratory Organs	...	...	...	...	...	19
Alcoholism, Cirrhosis of Liver	...	...	...	...	...	10
Diseases and Accidents of Parturition and Pregnancy	...	...	...	...	...	9
Heart Diseases	...	...	...	...	...	168
Other Diseases, Circulatory System	...	...	...	...	...	19
Accidents ...	...	...	...	...	...	29
Suicides ...	...	...	...	...	...	19
Appendicitis ...	...	...	...	...	...	5
Diseases of Brain and Nervous System	...	...	...	...	...	167
Diseases of Digestive System...	...	...	...	...	...	45
Diseases of Urinary System ...	...	...	...	...	...	7
Old Age ...	...	...	...	...	...	111
Acute Rheumatism ...	...	...	...	...	...	4
Rheumatoid Arthritis ...	...	...	...	...	...	6
Nephritis and Bright's Disease	...	...	...	...	...	77
Diseases of Reproductive System	...	...	...	...	...	4
Atelectasis ...	...	...	...	...	...	4
Premature Birth ...	...	...	...	...	...	49
Congenital Defects ...	...	...	...	...	...	7
Convulsions ...	...	...	...	...	...	10
Cerebro Spinal Fever ...	...	...	...	...	...	1
Gastritis, Gastro Intestinal Catarrh	...	...	...	...	...	5
Injury at Birth ...	...	...	...	...	...	3
Puerperal Fever ...	...	...	...	...	...	1
Atrophy, Debility, &c. ...	...	...	...	...	...	26
Tubercular Meningitis ...	...	...	...	...	...	12
Tuberculous Peritonitis, Tabes Mesenterica	...	...	...	...	...	11
Syphilis ...	...	...	...	...	...	6
Rickets... ...	...	...	...	...	...	2
Meningitis (not Tuberculous)	...	...	...	...	...	15
Laryngitis ...	...	...	...	...	...	1
Tetanus ...	...	...	...	...	...	1
Diabetes Mellitus ...	...	...	...	...	...	16
Diseases of Bone ...	...	...	...	...	...	3
Diseases, Organs of Special Sense	...	...	...	...	...	5
Malnutrition ...	...	...	...	...	...	1
Other Causes ...	...	...	...	...	...	43
All Causes ...						1,561

Smallpox.

The borough remained free from this disease throughout the year under review.

Information was however received from one Port Authority that a person who had been in contact with the disease, whose destination was Halifax, had landed in the country. This contact was kept under observation for a period of 15 days.

Scarlet Fever.

It is satisfactory to report for a second year in succession, a considerable diminution in the prevalence of this disease within the borough. There were 109 cases notified, against 176 during the previous year. This is the smallest number notified during any year since 1907, and with the exception of that year, since 1896.

The following table shows the age periods within which the cases notified fell.

Age Period	0-1	1-5	5-15	15-25	25-45	45-65	65 up
Cases	... 2	26	72	7	2	...	...
Deaths		1	...	...	...	...	...

Only one death occurred from this disease during the year.

The following table shows the average number of cases notified, and the average attack rate in quinquennial periods, since the year 1885.

Period	Average No. of Cases of Scarlet Fever per annum notified	Average Population	Average attack rate per 1000 population	Average case Mortality per cent. attacked
1885-9	331	79,207	4.1	6.1
1890-4	255	86,808	2.9	5.8
1895-9	392	95,755	4.0	3.4
1900-4	465	103,780	4.4	3.4
1905-9	274	102,908	2.6	2.9
1910-13	190	101,618	1.8	2.7

The above table shows that the attack rate per 1,000 of the population from this disease has diminished during recent years, and also that a marked improvement has taken place in the average case mortality per cent attacked, since the year 1885.

The following table gives the number of cases notified during each month of the year.

Scarlet Fever	January	February	March	April	May	June	July	August	September	October	November	December	Total
Cases notified...	11	5	9	9	14	9	10	11	14	9	5	3	109

Of the above 109 cases, one died, which gives a death-rate of $\cdot 009$, and a case mortality of $\cdot 91$ per cent of those notified, against a death-rate of $\cdot 07$ and a case mortality of $4\cdot 5$ per cent during the previous year.

The above is the lowest deathrate recorded from this disease since the year 1896.

Fever.

Included under the above heading are Enteric or Typhoid, Typhus, and Continued fevers.

No case of either Typhus or Continued fever was reported during the year.

There were 16 cases of fever notified, all of which were Enteric, against a total of 35 during the previous year.

This disease was most prevalent in the month of December, during which, four cases were notified.

The following table gives the sanitary conditions connected with, and the probable or assigned causes of the notified cases of typhoid fever.

Disease	Number of Cases reported	Drainage			Old Middens	Goux Closets	Water Closets	Probable or assigned cause		
		Good	Bad	Fair				No trace	From a previous case in same house	From Eating Shell Fish
Typhoid Fever...	16	10	2	4	1	12	3	11	3	2

From investigations made, it is most probable that two of the above cases were due to eating shell-fish, as the following notes will show :—

E.T., a male, aged 26, commenced to be ill about October 13th. A doctor was called in on October 29th, and the person was notified as suffering from typhoid fever on October 31st. He ate a quantity of oysters while away on his holiday, between the 9th and 16th of August, the source of which was unknown.

R.W., a male, aged 11 years. Commenced to be ill on October 5th. He was reported to be suffering from typhoid fever on October 20th. He used to assist his father, who is in business as a fishmonger, and had eaten uncooked mussels.

Probably two other cases were indirectly caused through the eating of shell-fish, because in a family where a suspicious case of illness had occurred in a sister, who consumed mussels about 14 days before her illness commenced, two cases were afterwards reported.

The following table gives the number of cases of typhoid fever notified since the year 1899, and the number of deaths each year since that date.

Year	Number of Cases Reported	Number of Deaths
1899	92	22
1900	79	20
1901	67	15
1902	65	14
1903	61	11
1904	47	10
1905	50	9
1906	38	4
1907	60	9
1908	53	10
1909	44	8
1910	33	9
1911	35	10
1912	35	4
1913	16	7

Of the 16 cases of typhoid fever reported during the year, 7 died, giving a deathrate of $\cdot 06$, and a case mortality of 43 per cent., against a deathrate of $\cdot 03$, and a case mortality of 11 per cent. during the previous year.

These figures show that although a fewer number of cases were reported, they were of a more virulent type than those notified during the previous year.

Diphtheria.

I have to report an increased prevalence of this disease in the borough during the year, in fact, it assumed an epidemic form, more especially in the South-owram and Skircoat wards.

The period of greatest prevalence was during the months of November and December, and in the latter month 21 cases were notified.

A special report on this outbreak was furnished to the Local Government Board.

It would appear from the number of notifications received, since the notification of infectious diseases was made compulsory, the borough was comparatively free from this disease previous to the year 1904. Since that year however it has been much more prevalent, and the following table shows the number that have been notified each year since that date.

Year	Number of Cases Reported	Number of Deaths
1904	80	17
1905	87	27
1906	158	42
1907	118	28
1908	72	11
1909	128	27
1910	137	23
1911	110	23
1912	81	6
1913	111	20

As previously stated, the disease was most prevalent in Skircoat, but both Southowram and Kingston wards also contributed a considerable number of cases.

All Saints' school in Skircoat was so much affected, as to necessitate its closure.

Before doing so however, a large number of swabs were taken from the throats of suspicious children, several of which were found on examination to give a positive result. These children were kept under observation, and were not allowed to return to school, even after the school was re-opened, until at least two negative swabs had been obtained.

Several cases of the disease also occurred in Standard I, Girls' Department, of Haugh Shaw School. A similar procedure was also adopted here, with the result that several positive swabs were obtained. This standard was excluded from school, and those children who gave positive results, were treated in exactly the same manner as those attending All Saints' school.

The class rooms of these schools were disinfected and cleansed, and the results obtained were very satisfactory, as this outbreak of the disease was soon arrested.

I also took the precaution of not dismissing any case of diphtheria after recovery, from the hospital, until at least two negative swabs had been obtained.

All these swabs were examined by my Assistant, Dr. Taylor, and without his assistance, it would have been impossible for me, with all my other duties, to have carried out such a thorough examination of the children attacked, and the contacts. I attribute largely the success of our efforts, to the thorough examination of the children, made in this way. There is no doubt that school influence played an important part in the spread of this disease.

In connection with the Order for the supply of Anti-diphtheritic Serum to poor persons, 23 doses were supplied to ten medical practitioners during the year, the cost of which amounted to about £5.

Many of the cases reported were of a very virulent type, for out of 111 cases notified, twenty died, giving a deathrate of $\cdot 19$ per 1,000, and a case mortality of 18 per cent., against a deathrate of $\cdot 05$, and a case mortality of 7 per cent. during the previous year.

The following table gives the deathrate per 1000, and the case mortality from the disease during the past nine years.

Year	Deathrate per 1000	Mortality per cent
1905	·26	31
1906	·40	26
1907	·27	23
1908	·10	15
1909	·26	21
1910	·22	16
1911	·22	20
1912	·05	7
1913	·19	18

Erysipelas.

The number of cases reported during the year was 57 against 46 during the previous year. Two deaths from this disease were registered during the year.

Measles.

This disease was less prevalent in the borough, and at no period did it assume an epidemic form. There were 9 deaths registered therefrom against 15 during the previous year, and all were of children under 5 years of age.

This gives a deathrate for the year of ·08 per 1,000, against ·14 during the previous year.

Whooping Cough.

For the second year in succession I have to report a considerably less prevalence of this disease. It caused five deaths only, against eight during the previous year, and all were of children under five years of age.

This gives a deathrate of $\cdot 04$, against $\cdot 07$ during the previous year.

Diarrhoea and Enteritis.

No doubt, owing to the warm dry summer of last year, these diseases were more prevalent, and caused a larger number of deaths than during the previous year, when we experienced a cold and wet summer.

These diseases gave rise to 50 deaths, against only 20 during the previous year.

Diarrhoea was responsible for 27 of the above, and Enteritis for 23.

This gives a deathrate of $\cdot 49$ per 1,000, against 1·9 and $\cdot 68$ respectively during the previous two years.

The above numbers however include the deaths which occurred from these diseases at all ages. The practice of the Registrar General now however is to exclude from the zymotic deathrate, all deaths above the age of two years, and the number of deaths under two years of age from these causes in the borough during the year was 34.

There has also been an alteration made in the method of calculating the diarrhoea deathrate under two years of age. This deathrate is now given in proportion to the number of children born, and the following table serves to compare Halifax, with the average deathrate of England and Wales, and other towns from these causes.

					Mortality under 2 years of age per 1,000 Births
England and Wales	...	...	...	...	23·41
96 Great Towns ...	...	...	...	...	29·33
145 Smaller Towns	...	...	...	...	24·73
England and Wales, less the 241 Towns	...	...	...	...	14·39
Halifax	...	...	...	...	18·17

The deathrate from Diarrhœa and Enteritis under two years of age, per 1,000 births, of the other Yorkshire great towns, for the year under review, was as follows:—Leeds, 30·2; Sheffield, 30·4; Bradford, 29·1; Hull, 41·2; Huddersfield, 17·3; York, 18·2; and Rotherham, 30·2 per 1,000 born respectively.

All the above, like Halifax, show marked increases in this deathrate, with which the latter very favourably compares.

Influenza.

There were eight deaths registered from the above cause, against seven during the previous year.

This disease has evidently not been so very prevalent in the borough for several years past.

Respiratory Diseases.

Bronchitis, Pneumonia, and Pleurisy accounted for 265 deaths, against 245 during the previous year.

Of the above deaths, 147 were due to Bronchitis, 113 to Pneumonia, and 5 to Pleurisy, giving a deathrate of 2·6 per 1000, against 2·4 during the previous year.

Although the year under review shows a slight increase in the respiratory deathrate, there has been a gradual improvement in this deathrate during the past 12 years, the figures for the previous 12 years being:—2·4; 2·5; 2·3; 2·8; 2·4; 2·7; 2·7; 2·7; 2·9; 3·1; and 3·0 respectively.

The above improvement in the respiratory deathrate is entirely due to the fall in this deathrate in children under five years of age. The deathrate from respiratory diseases of persons over five years of age is practically the same as it was 12 years ago, as the following table will show.

YEAR	Population over 5 years	Number of Deaths over 5	Deathrate per 1,000	Average
1902	94854	219	2·3	2·1
1903	94666	200	2·1	
1904	94337	194	2·0	
1905	94158	194	2·0	
1906	93979	216	2·2	2·2
1907	93800	209	2·2	
1908	93621	182	1·9	
1909	93442	240	2·5	
1910	93263	189	2·0	2·1
1911	93094	197	2·1	
1912	93187	201	2·1	
1913	93646	211	2·2	

From the above table it will be seen that the average death-rate, taken in periods of four years, has remained constant, when calculated per 1,000 persons living above the age of five years, while the following table shows that in the deathrate from this disease under five years there has been a constant fall, when calculated per 1,000 children living under five years of age.

YEAR	Population under 5 years	Number of Deaths under 5	Deathrate per 1,000	Average
1902	9744	111	11·3	10·4
1903	9594	109	11·3	
1904	9585	91	9·4	
1905	9426	92	9·7	
1906	9267	73	7·8	7·2
1907	9108	72	7·9	
1908	8949	70	7·8	
1909	8790	49	5·5	
1910	8631	51	5·9	6·3
1911	8472	65	7·6	
1912	8313	44	5·4	
1913	8154	54	6·6	

The deathrate from Bronchitis, in children under five, shows rather a greater fall than that from Pneumonia in the same age period, when calculated per 1,000 children living under five years of age, as the following table will show.

YEAR	Population under 5 years	DEATHS UNDER 5 YEARS					
		Bronchitis	Rate per 1,000	Average	Pneumonia	Rate per 1,000	Average
1902	9744	39	4.0	3.5	72	7.3	6.9
1903	9594	33	3.4		76	7.9	
1904	9585	38	3.9		53	5.5	
1905	9426	26	2.7		66	7.0	
1906	9267	21	2.2	2.2	52	5.6	4.9
1907	9108	23	2.5		49	5.3	
1908	8949	25	2.7		45	5.0	
1909	8790	15	1.7		34	3.8	
1910	8631	14	1.6	2.0	37	4.2	4.1
1911	8472	22	2.5		43	5.0	
1912	8313	19	2.2		25	3.0	
1913	8154	17	2.0		36	4.4	

Phthisis.

The number of deaths registered from Phthisis Pulmonalis during the year was 102 against 105 during the previous year. This gives a deathrate of 1.00 per 1,000, against 1.03 for the previous year.

Though this deathrate is below that of the previous year, it is slightly above that of 1911, which was the lowest on record.

The deathrate from this disease varies in different parts of the borough, and the following table gives the average deathrate in each ward for the past ten years.

WARD	No. of Deaths—Phthisis Pulmonary										Average No. of Deaths	Average Pop'lotion	Death- rate per 1,000
	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913			
Ovenden ...	10	12	10	5	8	6	5	4	6	5	7	6725	1·0
Akroydon ...	4	4	2	4	12	4	8	9	7	3	5	6209	·8
North ...	10	11	7	7	20	22	8	10	8	12	11	7766	1·4
Central ...	9	8	16	14	8	9	11	5	8	8	9	7307	1·2
West ...	13	9	7	7	16	11	14	10	12	12	11	8712	1·2
South ...	4	6	5	7	10	7	4	2	...	8	5	7427	·6
East ...	14	18	17	19	6	12	9	11	18	14	14	7182	1·9
Southowram	6	10	10	8	9	9	9	11	10	10	9	7080	1·2
Skircoat ...	20	12	9	8	12	12	7	6	6	6	10	10161	·9
Copley ...	5	5	2	3	4	...	2	4	2	1	3	3017	·9
Pellon ...	10	8	10	10	9	6	8	7	6	8	8	9014	·8
Kingston ...	12	12	11	12	14	9	5	6	10	3	9	10089	·8
Illingworth.	10	11	3	11	6	6	9	5	3	8	7	7062	·9
Northowram	3	4	5	4	8	3	4	2	4	2	4	3173	1·2
Warley ...	4	5	8	1	4	4	...	2	5	2	3	2777	1·0
Totals	134	135	122	120	146	120	103	94	105	102	118	103701	1·1

It will be observed that East ward has considerably the highest average phthisis deathrate, while 9 of the wards, viz :—Ovenden, Akroydon, South, Skircoat, Copley, Pellon, Kingston, Illingworth, and Warley, have average phthisis deathrates below that of the borough for the past ten years.

The following table shows the deathrate from this disease during the past thirteen years.

Year	Deathrate	Average
1901	1·38	1·25
1902	1·03	
1903	1·27	
1904	1·28	
1905	1·30	
1906	1·18	1·18
1907	1·16	
1908	1·42	
1909	1·17	
1910	1·01	
1911	·92	·98
1912	1·03	
1913	1·00	

The above table shows the decline which has taken place in the phthisis deathrate during the past 12 years, in fact, this deathrate has fallen 25 per cent. within the past 10 years.

The following table gives the average phthisis deathrate in decennial periods since 1881, and compares it with the average of England and Wales.

	Average Deathrate from Phthisis	
	Halifax	England & Wales
Ten Years - 1881-1890 ...	2·00	1·72
Ten Years - 1891-1900 ...	1·50	1·39
Ten Years - 1901-1910 ...	1·22	1·16
Two Years - 1911-1912 ...	·97	1·03
One Year - 1913 ...	1·00	...

From the above table it will be observed that the phthisis deathrate of Halifax 33 years ago, was considerably above that of England and Wales, that there has been a marked fall in this deathrate, and that now it is slightly below the average of the country generally.

There were 50 deaths from other forms of tubercular disease, which, added to the above, make a total of 152 deaths for the year due to the various forms of tuberculosis.

This gives a total deathrate from all tubercular diseases of 1·4 per 1000, the same as that of the previous year.

The causes of death from tubercular disease, other than phthisis, were as follows.

Tubercular Meningitis ...	12
Tuberculous Peritonitis	
Tabes Mesenterica ...	11
Other Tubercular Diseases ...	27

On February 1st of the year under review, the Public Health (Tuberculosis) Regulations, 1912, issued by the Local Government Board, came into operation. These Regulations revoked, from the above date, those previously issued in this connection, viz:—The Public Health (Tuberculosis) Regulations, 1908; the Public Health (Tuberculosis in Hospitals) Regulations, 1911; and the Public Health (Tuberculosis) Regulations, 1911.

The new Regulations consolidate, and in some particulars amend the previous regulations, the chief alteration being, the application of compulsory notification to non-pulmonary as well as pulmonary tuberculosis.

The previous Regulations were therefore in force during the month of January only, and during that period, a total of 17 notifications, which of course referred to pulmonary tuberculosis only, were received. Of this number, 11 were primary cases, the remainder being duplicates.

Of the 11 primary cases, 7 were males, and 4 females.

From February 1st to the end of the year, under the new Regulations, a total of 393 notifications were received, which number included 118 duplicate notifications. There was therefore a total of 275 primary cases notified during this period.

Of this number, 162 referred to pulmonary, and 113 to non-pulmonary cases.

Of the 162 pulmonary cases, 89 were males, and 73 females, and of the non-pulmonary cases, 50 were males, and 63 females, or a total for all forms of tubercular disease of 139 males, and 136 females.

Including the 11 cases notified during January there were therefore during the year, a total of 286 primary cases notified, which number includes 173

pulmonary, and 113 non-pulmonary cases, 146 being males, and 140 females.

The foregoing particulars are set out in the following table.

Localisation of Disease.	Sex	Primary Cases.				Notified more than once.			
		1 month to Janua'y 31st.	Forms		Total Primary	Supple-mental	Forms		Total
			A	B			C	D	
Pulmonary	Male	7	88	1	96	21	31	25	173
	Female	4	70	3	77	14	10	5	106
Non-Pulmonary	Male	...	45	5	50	2	2	...	54
	Female	...	52	11	63	6	1	1	71
Total ...	...	11	255	20	286	43	44	31	404

The following table gives the seat of the disease, as shown by the notifications.

Lungs	163	Foot and Wrist	1
Lungs and Intestines ...	1	Ankle	1
Lungs and Abdomen ...	2	Spine	11
Lungs and Cervical Glands ...	2	Jaw	1
Lungs and Spine ...	1	Bone of Arm	1
Lungs and Larynx ...	2	Elbow	1
Lungs and Peritoneum ...	1	Humerus and Tibia...	1
Pleura	2	Left Carpus	1
Pleura and Ribs	1	Thigh, Leg, and Arm ...	1
Cervical Glands	21	Bones of Leg	1
Axillary Glands and Sinuses...	1	Intestines	3
Cervical and Submaxillary Lymphatic Glands ...	1	Peritoneum	7
Glands	6	Abdominal	1
Glands of Groin	3	Hip Joint	11
Glands of Neck and Soft Palate	1	Hip Joint and Pelvis ...	1
Glands behind Right Sterno Mastoid	1	Hip Joint, Femur, &c. ...	1
Submaxillary Glands ...	1	Brain, Meninges	5
Lymphatic Glands	1	Right Base	1
Mesenteric Glands	1	Psoas Muscle	1
Glands Left Axilla and neighbourhood...	1	Larynx	3
Mediastinal Glands & Larynx	1	Kidney	4
Axillary Glands	1	Sternum	1
Maxilla (Superior)	1	Lumbar Vertebrae	1
Cervical and Axillary Glands	1	Illiatic Abscess	1
Right Knee	4	Fistula in Ano:—	
Finger	1	Ischio Rectal Abscess ...	1
Foot	1	General	1
		Total	286

Eighteen notifications were received in respect of persons not residing within the borough, and these were duly transmitted to their respective districts as follows:—Luddendenfoot, 2; Ripponden, 1; Greetland, 2; Mytholmroyd, 1; Lightcliffe, 1; Southowram, 1; Sowerby Bridge 4; Brighouse, 2; Rishworth, 1; Todmorden, 1; Midgley, 1; and Manchester, 1.

Notifications were also received in respect of 11 Halifax residents who were receiving treatment in Sanatoria outside the borough, as follows:—Meathop Sanatorium, Grange-over-Sands, 6; Morton Banks Sanatorium, Keighley, 1; Elswick Sanatorium, Bingley, 1; National Sanatorium, Benenden, Kent, 2; and Withernsea Sanatorium, 1.

The ages, sex, and wards in which they resided, of both pulmonary and non-pulmonary cases, are shown in the following table.

	At all Ages		Under 1 year		1 to 5		5 to 15		15 to 25		25 to 45		45 to 65		65 and upwards	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Pulmonary ...	96	77	2	1	3	1	2	8	17	22	41	29	26	16	5	...
Non-Pulmonary	50	63	...	...	9	6	18	29	5	8	9	11	7	8	2	1
Total ...	146	140	2	1	12	7	20	37	22	30	50	40	33	24	7	1

	Ovenden	Akroydon	North	Central	West	South	East	Southowram	Sk reat	Copley	Pellon	Kingston	Illingworth	Northowram	Warley
Pulmonary ...	15	11	18	16	29	10	17	9	11	3	7	9	13	3	2
Non-Pulmonary	7	7	9	11	13	12	17	10	8	...	7	7	1	4	...
Total ...	22	18	27	27	42	22	34	19	19	3	14	16	14	7	2

The cases were all visited, and various enquiries made, the result of which are summarised in the following tables.

The first table gives the length of time each patient was stated to have suffered from the disease.

PERIOD	Pulmon-ary	Non-Pulmon-ary	PERIOD	Pulmon-ary	Non-Pulmon-ary
Under 1 week	...	...	4 to 5 years	4	2
1 to 2 weeks ...	3	2	5 to 6 „	2	1
2 to 3 „	7	3	6 to 7 „	3	3
3 to 4 „	4	4	7 to 8 „	1	...
1 to 2 months	20	12	8 to 9 „	1	2
2 to 3 „	10	8	9 to 10 „	1	...
3 to 4 „	19	13	10 to 11 „	2	3
4 to 5 „	9	5	11 to 12 „	1	...
5 to 6 „	4	2	12 to 13 „	2	...
6 to 7 „	18	9	13 to 14 „	...	...
7 to 8 „	1	2	14 to 15 „	...	...
8 to 9 „	3	5	15 to 16 „	...	...
9 to 10 „	3	3	16 to 17 „	...	...
10 to 11 „	1	...	Ailing from birth	4	2
11 to 12 „	2	...	A long time	1	...
1 to 2 years ...	18	10	Recent	2	...
2 to 3 „	12	10	No Information (for various reasons)	11	3
3 to 4 „	4	9	Total ...	173	113

The following table shows the occupations of those notified as suffering from the disease, males and females, as well as pulmonary and non-pulmonary cases being shown separately.

Occupations	Pul-mon-ary	Non-Pul-mon-ary	Occupations	Pul-mon-ary	Non-Pul-mon-ary
MALES			FEMALES		
Driver (Horse)	5		Home Duties	21	8
Engine Tenters	2		Charwomen	3	1
Iron Planer	1		Clerks	1	1
Draughtsman	1		Printers Shop	2	
Carriage Painter	1		Drawer, Worsted	3	
Hide and Skin Buyer	1		Weavers	5	2
Coal Miner	1		School Children... ..	5	23
Deputy Common Lodg- ing House	1		Jewellers Factory	1	2
Labourers	24	5	Silk Spreader	1	
School	2	17	Cloth Burlers	2	
Tailors	2	2	Bobbin Doffer	1	
Draper's Assistant	1		Rovers	5	
Hoist Tenter	1		Twisters	4	
Engineers Apprentice	1		Cigar Maker	1	
Clerks	2	1	Shop Assistants	1	1
Packer	1		Machinist, Boots	1	
Quarry Men	2	2	Winders	4	2
Insurance Agent	1		Milliner	1	
Errand Boy	1		Machinist, Und'clothing	2	1
Office Boy	1		Carpet Sewer	1	
Out Porter	1		Bobbin Cleaner	1	
Travellers	2		Presser, Underclothing	1	
Warehousemen	3	1	Firelighter Maker	1	
Dyer	1		Carder	1	
Pavior	1		Spinners	2	5
Manager Printing Ink Works	1		Domestic Servants	1	1
Blacksmith	1		Finisher, Clothing	1	
Carpet Weaver	1		Not Stated	1	
Fish Monger	1		Under Age	3	8
Brass Finishers	2		Bobbin Setter		1
Plasterer	1		Hawker		1
Retort Setter	1		Packer, Chemical Works		1
Stone Masons	3		Reeler		1
Overlooker	1		Carpet Setter		1
Mechanics	3	1	Nurse		1
Broker	1		Yarn Hanker		1
Stoker, Gas Works	1		Mender		1
Clay Miner	1				
Piecer	1				
Driller	1				
Baker	1				
Boiler Maker	1				
Upholsterer	1				
Setter	1				
Slipper Maker	1				
Cloggers & Bootmakers		2			
Doffer		1			
None		4			
Joiner		1			
Brass Moulder		1			
Spindle and Fly Maker		1			
Iron Turner		1			
Wire Coverer		1			
Not Stated	6	2			
Under Age	5	7			
TOTALS ...	96	50	TOTALS ...	77	63

In seeking information regarding the probable predisposing cause of the disease, the following particulars were obtained.

Probable Predisposing Cause	Number	
	Pulmonary	Non-Pulmonary
From a previous case or cases in family ...	15	4
Followed attack of Bronchitis, Pneumonia, or Pleurisy... ..	13	
Do. Influenza		1
Do. Measles	1	2
Do. Typhoid Fever	1	
Do. Scarlet Fever		1
Do. Appendicitis & Pneumonia	2	
Do. Rheumatic Fever	1	
Followed Brights Disease	1	
Do. Diabetes	1	
Do. Catarrh of Stomach		1
Do. Rupture		1
Do. Abscess		1
Do. Accidents		17
Do. Chills	8	3
Intemperate Habits	1	
Overwork	2	
Anæmia	3	
Nature of Occupation	9	1
Constitutionally Delicate	9	8
Not known	106	73
Total ...	173	113

The enquiries made as to the family history of those suffering from the disease, resulted in obtaining the information shown in the following table.

Previous Cases	Families
No History of Disease in Family ...	171
One previous case in Family	50
Do. do. Relatives	20
Two Do. cases in Family	17
Do. do. Relatives	4
Three Do. do. Family	2
Five Do. do. Family	1
History in Family	4
Information unobtainable for various reasons	17

With regard to the size of the house, and the number of persons occupying the same, the following table gives the result of the observations made thereon.

Number of Families	Number of Persons	Number of Rooms	Number of Families	Number of Persons	Number of Rooms
2	1	1	15	5	4
5	2	1	6	6	4
3	3	1	5	7	4
13	2	2	3	8	4
16	3	2	1	11	4
11	4	2	1	2	5
15	5	2	3	3	5
14	6	2	9	4	5
5	7	2	6	5	5
2	9	2	3	6	5
3	2	3	8	7	5
17	3	3	1	8	5
14	4	3	1	10	5
10	5	3	1	11	5
10	6	3	1	5	6
8	7	3	1	6	6
3	8	3	5	7	6
4	9	3	1	8	6
1	10	3	1	9	6
1	12	3	1	11	6
2	2	4	1	4	7
6	3	4	1	7	7
7	4	4	1	8	7
1 patient lived at Salvation Army Shelter.					
11 Do. Workhouse or St. Luke's.					
13 Do. Common Lodging Houses.					
3 Do. A Mission Home.					
10 patients no information obtained.					

The information regarding the drainage of the houses occupied by those notified, resulted in the following information being obtained.

In Good Condition	...	147
In Fair	„	80
In Bad	„	8
Minor Defects	...	4
In Doubtful Condition	...	5
No Drains	...	5
Information unobtainable for various reasons	...	37

The following table gives the result of the inspections regarding the ventilation of the houses affected.

Bad	...	...	3
Good	...	...	68
Fair	...	...	123
Poor	...	...	58
No information obtainable for various reasons	...	...	34

The method of excrement disposal in connection with each house is shown in the following table.

Waste Water Closets	...	1
Goux (Tub) Closets	...	210
Water Closets	...	32
Privy Middens	...	6
No information obtainable for various reasons	...	37

The condition of the houses as to cleanliness was as follows :—

Dirty	...	...	1
Clean	...	...	159
Fairly Clean	...	...	89
No information obtainable for various reasons	...	...	37

Disinfection was carried out after death, or removal to hospital, or elsewhere, and in this way 116 rooms, and 62 beddings were disinfected, 5 beddings being destroyed at owner's request.

Your committee had been busily engaged during the previous year, and also during the early months of the year under review, in looking out for a suitable site for a Sanatorium for the borough.

Consultations had been held with the West Riding County Authority, Bradford, and Huddersfield, with a view to the establishment of a joint sanatorium. These negotiations eventually fell through, and after having viewed a number of sites, the Council, on April 2nd, sanctioned the purchase of Green Lane Hall, Shelf, for the purposes of a sanatorium.

There was considerable opposition by Shelf to this proposal, and the Local Government Board held an enquiry regarding this matter on June 7th of the year under review, and the final sanction of the Local Government Board, for the use of Green Lane Hall, Shelf, as a Sanatorium was received on July 30th following.

Dr. Taylor was appointed Clinical Tuberculosis Officer, and Assistant Medical Officer of Health on May 20th, and commenced duties on July 1st following.

Plans had been prepared for the enquiry, providing for a hospital of 22 beds, a sanatorium pavilion of 20 beds, a Doctor's residence, and the Hall itself, for an administrative block.

Soon after the sanction of the Local Government Board was received, tenders were obtained for erecting the necessary buildings, and carrying out the various alterations required to provide a fully equipped hospital

and sanatorium upon this site. The tenders were eventually let, and the work pushed on with.

It was hoped that the sanatorium would have been opened during the year under review, but for various reasons the work was delayed, and the opening of the sanatorium had to be postponed until the current year.

Now that the sanatorium is opened, a complete and permanent scheme for dealing with tuberculosis in the Borough, is in full operation.

The Halifax scheme shortly consists of a Dispensary situated in the town, with any observation beds required at the Sanatorium, Shelf. The hospital block at the sanatorium, for cases which require nursing, and a pavilion of 20 beds for early cases, or those which do not require special nursing.

Dr. Taylor is the Resident Medical Officer at the Sanatorium, and also has charge of the Dispensary. Thus he is responsible for the working of the whole scheme, under the administrative control of the Medical Officer of Health.

It is proposed that the Bermerside Residential School should be linked up to this scheme, for the purpose of treating closed cases of tuberculosis in children of school age.

It is suggested that 10 beds should be reserved at Bermerside for this purpose, and an agreement to that effect has been entered into with the Governors, which is awaiting the final sanction of the Local Government Board, and the Board of Education. Any patients sent here will however be under the charge of Dr. Hunt, the Medical Officer to this residential school.

The following report has been submitted to me by Dr. Taylor, Clinical Tuberculosis Officer, on the work he has carried out during the year.

The routine of the tuberculosis work was described in the last Annual Report, and was continued on similar lines during 1913. My appointment in July as full time Clinical Tuberculosis Officer has enabled us to expand the work in different directions, and to further organise.

The centre is the Dispensary at 8, Clare Road, Halifax, which is conveniently situated.

The regular hours for treatment, examinations, and advice, are from 5 to 7 p.m., on Mondays and Thursdays, and appointments are made to see cases on the other days of the week at suitable hours. The tuberculosis Nurse has a room at the Dispensary for clerical duties, and for interviewing patients and others connected with the work.

All cases of tuberculosis notified to the Medical Officer of Health are visited by the Sanitary Inspectors, who draw up a report in prescribed form. These reports, when completed, are sent to the Dispensary, and the cases requiring attention by the Tuberculosis Nurse, are sorted out by the Medical Officer in charge.

The number of the Nurse's visits was as follows:—

	Insured	Non-Insured	Total
Notified persons visited ...	116	92	208
Repeat visits to Notifications	347	227	574
	463	319	782

All insured notified cases, applying for Sanatorium Benefit, are requested to visit the Dispensary. If they are not able to do so, a visit is made by the Tuberculosis Officer before admission to an institution.

Non-insured patients and contacts, if not under their own Doctor, and for other reasons, are referred to the Dispensary by the Sanitary Inspectors, Tuberculosis Nurse, Medical Practitioners, School Medical Officer, and various public agencies.

The number examined at the Dispensary was 167. Insured, 101 ; Non-insured, 66.

The total attendances at the Dispensary for the examination and treatment of these were 1685. Insured, 1223 ; Non-insured, 462.

The function of the Dispensary is largely educative. Patients are examined, tested, advised, urged to return for re-examination, educated verbally and by literature in temperature taking, use of spitting flask, prevention and hygiene. Thirty-three were treated by Tuberculin (total injections 935), and others were given inhalants, cod liver oil preparations, and a few symptomatic drugs.

The treatment of ambulant cases at the Dispensary has certain limitations. Increasing experience proves the value in selected cases, of small doses, very gradually increased, at weekly intervals. For diagnosis we begin with .0002 O.T, and for treatment, P.T.O, and B.E. are mostly used.

From the Dispensary, patients were drafted to various institutions, viz :—

	Insured	Non Insured	Total
Stoney Royd Hospital Special Block (Average length of stay, 5 weeks, 4 days)	62	5	67
Sanatoria outside Borough ...	22		22
Bermerside Home and School for children		8	8
Poor Law Hospital		1	1
Royal Halifax Infirmary ... (Surgical Cases)		5	5

Chemical and Bacteriological Examinations.

There were 241 specimens of Sputum examined, 72 positive for T.B's, 169 negative. Smear preparations usually suffice, but in repeated negative or suspicious cases, a preliminary antiformin treatment of the sputum is employed. Many sputa were also examined cytologically, for elastic fibre, and for classification of other organisms. The urine was examined for T.B's in 10 cases, with 2 positive results.

Non-insured.

	Under 5	5 to 16	Above 16	Total
Males	5	16	3	24
Females	4	24	14	42
Total ...	9	40	17	66

These were treated as follows :—

- 5 were sent to the Isolation Phthisis Block.
- 8 Do. Bermerside Home and School.
- 1 was sent to a Sanatorium.
- 5 were sent to the Royal Halifax Infirmary.
- 5 were sent to a Holiday Home.
- 1 was sent to the Poor Law Infirmary.
- 7 were treated by Tuberculin injections at the Dispensary.

The remainder were :—

- (a) Contact cases with no definite signs.
- (b) Patients of other Doctors referred for consultation, diagnosis, or testing.
- (c) Notified cases for observation and advice.

Of 28 contacts, 15 were found to show signs and symptoms warranting a suspicion, and even diagnosis of tuberculosis.

Insured Persons.

The total applications for Sanatorium Benefit were 85, including one dependant. Nine of these did not go forward with their applications, or were not examined by the Tuberculosis Officer. Of the remaining 76, all were suffering from Tuberculosis.

(1.) Tuberculosis of Lungs—

Stage I.	...	...	...	8
I-II.	...	...	...	6
II.	...	...	...	17
II-III.	...	...	...	7
III.	...	...	...	23
I or II with severe laryngitis	...			3
II or III with abdominal tuberculosis				4
I or II with renal tuberculosis	...			3—71
(2.) Tuberculosis of Glands	...	...		3
(3.) „ „ Bone	...	...		2— 5
Total				76

Only 8, or 11·3 per cent. were early cases; 6, or 8·4 per cent. were moderately advanced, but in 57, or 80·3 per cent. (Stages II and III, or complicated cases) the disease had made considerable ravages.

Age and sex groups of applicants :—

			Males.	Females.
16 to 20 years	...		8	9
21 to 30	„	...	18	18
31 to 40	„	...	15	7
41 to 50	„	...	4	
51 to 65	„	...	4	2
Total	...		49	36

Diagnosis

Of the 71 pulmonary cases

The Tubercle Bacillus was found in 35 or 49·3 per cent.
 Do. Do. absent in 30 or 42·2 per cent.

(Of these, 18 reacted to Tuberculin.)

There was no expectoration in 5 cases, but these gave a definite reaction to Tuberculin.

Duration of Disease at time of application.

Ranged from 3 months to 14 years. The average was three years.

In 7 % the disease had been present 10 yrs. and over.
 In 13 % do. do. 5 yrs. and under 10.
 In 51 % do. do. 1 year „ 5.
 In 29 % do. do. less than 1 year.

Form of Benefit granted by Committee.

Domiciliary	...	...	...	3
Isolation Hospital	...	...	...	33
Sanatorium	...	...	...	18
Hospital and Dispensary	...	...	...	15
Dispensary and Hospital	...	...	...	1
Dispensary alone	...	...	...	2
Sanatorium and Dispensary	...	...	...	2
Hospital and Sanatorium	...	...	...	2

General Results in the 76 applicants up to April, 1914.

Dead	...	...	...	...	...	26
Very ill	...	...	...	...	...	6
Fairly well or relapsed	...	...	...	...	...	14
Working	...	...	...	...	...	18
Still under treatment and observation	...	...	...	...	...	9
Left the town or no information	...	...	...	...	...	3

Treatment given and results in eight early cases (Stage I.)

1. Hospital 3 months, followed by Dispensary 6 months. Keeping well 12 months after.
2. Hospital 4 months, followed by Dispensary 3 months. Returned to work, still working 9 months after.
3. Sanatorium, 2 months. Quite well 12 months after.
4. Hospital 2 months, followed by Dispensary. Working and keeping well 6 months after.
5. Sanatorium 3 months. Keeps well 6 months after.
6. Hospital 11 weeks and Dispensary. Working. Still under Dispensary.

7. Domiciliary (extra nourishment). Working.
Under observation.
8. Sanatorium. Still in Sanatorium.

Remarks :—

Halifax does not lend itself to the treatment of consumptives in shelters, owing to lack of yard or garden space.

Efficient after care on discharge from Hospital or Sanatorium is necessary.

Dental treatment for those unable to pay, should be available before admission to the Sanatorium.

Anthrax.

There were 5 cases of this disease reported to me during the year :—

W.W. Employed as a Washing Bowl Feeder. On May 8th noticed a pimple on his cheek. Visited his Doctor on the 9th, and was admitted to the Royal Halifax Infirmary on the 10th. The wool he had to handle was Persian Wool in the raw state, after being opened, sorted, willowed, and the blood-stained parts removed.

C.H. Engaged at a Picture House in town. On May 22nd noticed a sore on his neck resembling a small boil, which became more painful on the following two days. Consulted his Doctor on the 24th, who ordered him to the Royal Halifax Infirmary on the 26th, where he underwent an operation. This patient lodged with a person who was employed as a Duler in a local factory where large quantities of raw wool are handled, and when at home, was in the habit of using the same towel.

J.E.R. Employed as a Wool Washer, also assisted in the willowing and Packing of Persian Wools, and Russian Camel Hair. On June 24th noticed a pimple on his forehead, which was very sore. Consulted his Doctor on the 27th, who ordered him into the Royal Halifax Infirmary on the 29th, The wools were sorted and all blood-stained parts removed before he handled it.

S.B. Employed as a Carding Machine Tenter, the wools treated being Persian, and Russian Camel Hair. On July 20th noticed a pimple on her thumb. Worked until August 2nd, when she knocked the top of the pimple off while washing clothes at home. Consulted her Doctor on the 4th, who ordered her into the Royal Halifax Infirmary.

G.H. Employed as a Willower and Packer of Persian and Russian Camel Hair wools. Noticed a pimple on his chin on July 31st. Worked until August 2nd, when he consulted his Doctor, who ordered him into the Royal Halifax Infirmary on the 3rd.

All the above patients eventually recovered from the disease.

Under the Anthrax Order of 1910, one farm was reported to me as an infected place by the Veterinary - spector, under the above Order.

Cancer.

Under the heading of Cancer, all the various forms of malignant disease are included.

The number of deaths registered from these causes during the year, was 143, against 116 during the previous

year, giving a deathrate of 1.40 per 1,000, against 1.14 for the year 1912. This is the largest deathrate recorded from this disease during the past 20 years, and I should consider, the highest that has ever been recorded.

This disease appears to be on the increase in the Country generally, and certainly the deathrate has shown a slight increase in Halifax since the year 1902.

Of the 143 deaths from this disease, 64 were males, and 79 were females.

The following table shows the organs affected in those who died from the disease.

Bowel and Pelvis ...	1	Rectum ...	8
Liver and Gall Bladder ...	1	Ventricles ...	6
Uterus... ..	7	Cæcum ...	1
Endocardium ...	1	Vulva ...	1
Tongue ...	4	Lungs ...	3
Liver ...	15	Femur ...	1
Pancreas ...	7	Ovaries ...	1
Stomach ...	17	Bladder ...	3
Oesophagus ...	10	Bowel ...	6
Tonsil and Pharynx ...	1	Pylorus ...	1
Breast ...	10	Peritoneum ...	2
Spine and Lungs ...	1	Pharynx ...	1
Pancreas and Liver ...	1	Prostate ...	3
Stomach and Rectum ...	1	Spleen ...	1
Testicles ...	1	Gall Bladder ...	1
Lymphatic Glands ...	2	Throat ...	1
Large Intestine... ..	6	Not stated ...	2
Peritoneum and Ovaries	2	Sigmoid ...	4
Abdomen ...	1	Thyroid Gland ...	2
Breast and Lung ...	1	Sacral Spine ...	1
Kidney and Bowel ...	1	Omentum ...	1
Cervical Glands ...	1	Nasal Fossa ...	1

The following table shows the deathrate from malignant diseases in Halifax since the year 1892.

YEAR	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
Deathrate...	·8	·7	·8	·8	1·1	·6	·6	·7	·7	·8	·9
YEAR	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Deathrate...	1·0	·8	1·0	·9	1·1	1·0	·8	1·0	1·1	1·1	1·4

Inquests and Uncertified Deaths.

The number of inquests held by the Coroner was 120, which included 17 on persons not belonging to the borough.

There were also 4 inquests held outside the borough on residents belonging thereto.

The 107 deaths certified by the Coroner after inquests, form 6·8 per cent. of the total deaths of the borough, and there were 11 deaths which were neither certified by a medical practitioner nor the Coroner, which corresponds to ·7 per cent. of the total deaths.

The following table shows the percentage of deaths certified by the Coroner, and the percentage of uncertified deaths during the past 12 years.

YEARS	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Percentage certified by Coroner ...	2·9	3·1	2·8	3·5	4·7	5·1	6·0	6·7	7·1	6·6	6·2	6·8
Percentage uncertified	2·6	1·5	1·0	0·7	0·7	0·9	1·0	0·7	0·8	0·4	0·1	0·7

Water Supply.

There are ten storage and six service reservoirs belonging to the Halifax Waterworks Committee, having a total capacity of 1,955,222,000 gallons.

The drainage area of the reservoirs is chiefly moorland or high mountain pasture, and is of the mill-stone-grit formation.

The water is conveyed to the town by means of covered conduits, and large iron pipes ; it is delivered at a high pressure, and with a constant supply.

The higher portion of the town is supplied from a service reservoir at Royles Head, to which the water is pumped, the lift being 300 feet.

With the exception of the water supplied from Ogden, and Ogden Kirk reservoirs, from which the water is filtered through high pressure filters, made by Messrs. Mather and Platt, of Manchester, the storage reservoirs are relied upon for the purification of the water.

Owing to the prolonged drought of last summer, there was a shortage of water, and the water supply had to be curtailed in consequence, as follows :—

Aug. 14th. Warning issued, asking consumers to exercise care.

Aug. 28th. The watering of gardens by hosepipe, and swilling of footpaths were prohibited.

Sep. 3rd. The washing of windows &c. was prohibited.

Sep. 29th. The water was turned off between 7 p.m. and 5 a.m.

Oct. 27th. The water was turned off between 5 p.m. and 7 a.m., and the Public Baths were closed.

Nov. 17th. The water was turned off between 7 p.m. and 7 a.m.

Nov. 19th. All restrictions were removed.

The water collected from the gathering grounds belonging to the Waterworks Committee is acid in reaction, and requires treatment in order to prevent its action upon lead service pipes.

The method of treatment carried out has been the same as in past years, viz: the addition of slaked Buxton lime, in the form of milk of lime.

The following table, which is prepared from figures obtained from the analyses of Mr. Dewhirst, the Borough Analyst, gives the acidity of the water, before and after treatment.

Month	Average Acidity of Sample of Water, in parts per 100,000			
	Ogden Reservoir		Ramsden Wood Reservoir	
	Before Treatment	After Treatment	Before Treatment	After Treatment
January ...	1·0	·12	No estimation	·18
February ...	1·1	·13	„	·25
March ...	·7	·14	„	·23
April ...	·75	·09	„	·21
May ...	1·2	·13	„	·21
June ...	1·0	·15	„	·24
July ...	·9	·11	·37	·15
August ...	·75	·09	No estimation	·12
September ...	·55	·09	„	·07
October ...	·75	·16	„	Slightly Alkaline
November ...	No estimation	Slightly Alkaline	„	„
December ...	1·1	·1	„	·11

The above are the average monthly results of a number of estimations, when the samples examined were found to be acid in reaction.

On 6 occasions however, the water supplied from Ogden, was found to be slightly alkaline in reaction, and on 13 occasions neutral. Similarly, on 17 occasions the Ramsden Wood water, as distributed, was found to be slightly alkaline, and on 9 occasions neutral in reaction.

The treatment of the water during the past year has been very successful, in fact, more so than during any previous year, and I congratulate Mr. Hartley, the Waterworks Engineer, on the excellent results he has obtained during the year. I have no hesitation in stating that the method adopted in Halifax for the treatment of the water is of great value from a public health standpoint.

Before this treatment was adopted, some 8 or 10 years ago, cases of lead poisoning were constantly cropping up. I believe the borough however to be now quite free from this state of matters, as no case of lead poisoning, from drinking Corporation water has come to my knowledge for many years past.

Sewerage and Drainage.

Mr. Lord, the Borough Engineer, has supplied me with the following particulars :—

The sewers have been regularly flushed and are generally in a satisfactory condition.

The Northowram sewerage system has been completed, and the drains of a considerable number of premises in that district are now connected up to the sewers.

The 48 in. main outfall sewer in the Hebble Brook is well advanced, and it is expected to complete the same during the present year.

Borrowing powers for the sewerage of Ovenden, and relaying the iron sewers in the Hebble Brook, between the Electricity Works, and Royston Wire Works have been obtained, and the work will be commenced during the ensuing year.

Scavenging, Disposal of Night Soil and House Refuse.

I believe the cleansing and scavenging of the streets has been efficiently carried out throughout the year.

All paved streets and roads are cleansed by your Committee, but the scavenging of macadamised roads is carried out by the Highways Committee.

The number of water closets in the borough is steadily increasing, although there is still a large amount of night soil to be dealt with under what is called the Goux system. There are now 17,999 Goux closets in the borough, against 18,195 during the previous year, or a reduction of 196 during the year. This is the first year in which I have been able to record a decrease of this form of closet within the borough.

All new houses, where a sewer and water supply are available, are now provided with water closets.

The Goux closets are emptied at periods varying from 3 to 10 days, according to circumstances, the tubs being washed on each occasion, and partly filled with absorbent material before being returned to the closets. There are, on an average, 21 horses, 21 vans, and 31 men engaged on this work.

The amount of night soil dealt with yearly in this way is about 7,000 tons. This is disposed of to a contractor, by rail at 3s.6d. and by boat at 2s.7d. per ton.

There are now 7,251 water closets in the borough, being an increase of 301 during the year, and there were converted into water closets, 38 privies and 71 goux closets during the year, or a total of 109.

The following table gives the number of water closets in the borough, and shows the increase which has taken place since the year 1893.

Year	Number of W.C.'s in the Borough
1893	3796
1894	3837
1895	3880
1896	3921
1897	3962
1898	4003
1899	4166
1900	4331
1901	4496
1902	4661
1903	4826
1904	4991
1905	5157
1906	5317
1907	5566
1908	5852
1909	6097
1910	6421
1911	6676
1912	6950
1913	7251

The number of privy middens in the borough is now 753 against 760 during the previous year, being a decrease of 7, and 408 dry ashpits, an increase of 1.

The reason why the number of privy middens existing in the borough has not diminished in proportion

to the number converted into water closets is because a number have been registered during the year and are now emptied by the Corporation which were previously attended to by the owners or occupiers.

With regard to the removal of house refuse, in the majority of cases, tubs are provided by the Corporation, and the work is carried out by men employed by your Committee.

The average number of horses and carts used for the removal of this refuse was 19, and the number of men engaged in this work during the year under review was 38.

Most of the house refuse is still disposed of by tipping, the remainder, a small proportion only, being dealt with at the Dust Manipulator works.

The Dust Manipulator has dealt with all the garbage from the Slaughterhouse, Market Hall, as well as the fish refuse from certain shops in the town, together with a certain amount of house refuse, all of which is converted thereby into a fairly good manure. This Manipulator was installed in the year 1910, and has continued to work satisfactorily throughout the year.

The following was the amount of refuse carted to the Manipulator.

				Loads.
House Refuse	...	...	...	1,528
Market Garbage	...	...	...	443
Fish Garbage	...	...	...	186
Slaughterhouse Garbage	...	...	...	193
Sundry Refuse	...	...	...	138
Total				2,488

The refuse after having been passed through the Manipulator, was disposed of as follows :—

	Tons	Cwts	Qrs.
By Rail	846	0	0
Total Manure	846	0	0
Ground House Refuse to Goux Depot ...	820	12	1
Total	1,666	12	1

There was no difficulty experienced in getting rid of the manure during the year, because it had all been disposed of, under a contract which expires in February, 1915, at 10s. per truck load, or about 1s.3d. per ton.

Common Lodging Houses.

There are 16 Common Lodging Houses situated within the borough, the same number as last year. They are registered to accommodate 897 lodgers, against 732 previously.

These lodging houses are under the supervision of the police, and the Chief Constable informs me that there has been no cause for complaint during the year, that they have been generally well conducted, and no legal proceedings have been necessary during the year.

Considerable improvement has been carried out during the year in connection with the sanitary condition of the lodging houses. Twelve water closets have been provided in place of an offensive trough closet and the ordinary goux closets. In five cases also, fire escapes have been provided, while several other sanitary defects have been remedied.

Factories and Workshops.

Due attention has been given to the condition of the Factories and Workshops during the year, and some

improvements have been secured, without the necessity of resorting to legal proceedings.

The number of complaints regarding the neglect of limewashing was 30, against 34, during the previous year while dirty closets, floors, staircases, &c., numbered 6, against 17 during the previous year.

There were 8 complaints regarding defective ventilation, and only one of overcrowding.

The following table gives the number of visits that were paid to factories and workshops, by the District Sanitary Inspectors.

District	Number of Visits made to Factories	Number of Visits made to Workshops
A	35	333
B	97	354
C	65	228
D	52	72
Total ...	249	987

The four District Sanitary Inspectors are each responsible for the inspection of the factories and workshops situated in his own district, and the number of visits paid for this purpose during the year by the Sanitary Inspectors was 1236, against 1365 during the previous year.

The four tables which follow, indicate the number and nature of the various sanitary defects, and the amount of work done by the Sanitary Inspectors in their respective districts.

DISTRICT A.

INSPECTOR JOHN GEORGE WALSHAW.

Number of Workshops on the Register, 275.

Nature of Defects				Number Registered
IN FACTORIES.				
Offensive condition of closets	...	...	...	2
Insufficient closet accommodation	...	...	...	2
Closets insufficiently screened	...	..	...	2
IN WORKSHOPS.				
Rooms requiring limewashing	...	...	...	8
Workroom overcrowded	...	...	...	1
Insufficient ventilation	...	...	...	3
Defective goux closets	...	...	..	1
Closets opening direct into workroom		...	...	3
Defective floors	...	...	...	2
Total				24

DISTRICT B.

INSPECTOR ROBERT PICKARD.

Number of Workshops on the Register, 230.

Nature of Defects					Number Registered
IN FACTORIES.					
Offensive smoke	...	...	...	...	3
Offensive goux closets	...	...	...	...	8
Want of screens or separate approaches to water closets	...	...	...	...	2
Insufficient light and ventilation to water closets	...	...	...	...	2
Insufficient closet accommodation	..	...	...	...	3
Defective, made-up, and untrapped drains	...	...	...	...	12
Convert tub to water closets	...	...	...	...	5
IN WORKSHOPS					
Rooms requiring limewashing	...	...	...	...	15
Insufficient ventilation	...	...	...	..	5
Insufficient closet accommodation	...	...	...	...	2
Defective drains	...	...	...	...	1
No copy of abstract	...	...	...	..	2
Defective Water closets	..	...	...	...	1
Goux closet to convert to water closet	...	...	...	...	1
Dirty floors, staircases, and closets	..	..	..	..	3
Total					65

DISTRICT C.

INSPECTOR JAMES EDWARD FIRTH.

Number of Workshops on the Register, 173.

Nature of Defects					Number Registered
IN FACTORIES.					
Untrapped drains	...	...	...	...	1
Made-up water closets	...	...	...	...	43
Made up drains	...	...	...	..	6
Made up Lavatory Drains	...	...	...	...	4
Nuisance from gas engine exhaust			...	...	1
Closets insufficiently partitioned off			...	...	1
Insufficient closet accommodation			...	...	12
IN WORKSHOPS.					
Closets opening direct into workrooms			...	...	1
Dirty floors	...	...	...	...	1
Offensive fumes	...	...	...	...	2
Insufficient closet accommodation	...		...	...	2
Workrooms requiring limewashing			...	...	7
Total					81

DISTRICT D.

INSPECTOR FRED TEAL.

Number of Workshops on the Register, 84.

Nature of Defects					Number Registered
IN FACTORIES.					
Insufficient closet accommodation	...	...			2
Offensive Urinals	...	...	...	...	1
Insanitary closet accommodation	..	...			4
Closets opening direct into workroom	...	...			1
Closets structurally defective	...	...	...	...	1
Offensive closets	...	...	...	...	5
Defective fallpipe drain	...	...	...	...	1
IN WORKSHOPS					
No Abstract	...	...	...	...	1
Insufficient closet accommodation	..	...			1
Total					17

As shown by the foregoing tables, there were 187 nuisances and sanitary defects dealt with, against 185 during the previous year.

There were 22 sanitary defects which remained unabated at the end of the previous year, and these, together with the 187 above referred to, make a total of 209, of which 189 were remedied, and 20 remained unabated at the end of the year.

The number of notices regarding sanitary defects received from the Factory Inspector, through the Town Clerk, under section 5 of the Factory and Workshops Act was 25. Of these 14 were in connection with factories, 10 with workshops, and 1 with a workshop-bakehouse.

The above were duly attended to, and after the defects were remedied, due notice thereof was given to the Factory Inspector.

The number of notices of abatement sent to the Factory Inspector was as follows :—Factories, 11 ; Workshops, 8 ; Workshop-Bakehouses, 1.

There were 5 fewer notices sent to the Factory Inspector than defective notices received from him, the cause being that certain of the defects had not been remedied before the end of the year under review.

With reference to the outworkers, there was a decrease, both in the number of lists sent in and in the number of outworkers notified under section 107 of the Factory and Workshops Act.

The Sanitary Inspectors paid 67 special visits for the purpose of inspecting the conditions under which the outworkers carried out their work.

There were 25 lists sent in, against 26 during the previous year, and the number of outworkers notified was as follows :—

	Tailors	Shoe-makers	Seam-stresses	Knitters	Total
No. of Outworkers	24	9	8	2	43

The conditions under which outworkers were employed, who worked at home, were found satisfactory.

Quite a number who are returned as outworkers occupy workshops of their own, and are visited in that respect by the Sanitary Inspectors.

Two names were included in the lists sent in, of outworkers who reside outside the borough, viz : one at Leeds, and one at Queensbury, and notices were sent in accordance with the Act, to the Medical Officers of Health to those districts.

One notice was received from Bradford, of an outworker who resides in Halifax.

The following is a detailed list of all the workshops on the workshop register. This Register has been kept up-to-date from lists received from the Factory Inspector, and there was an increase of one during the year.

Pattern Card Maker ...	1	Saddlers ...	8
Joiners & Cabinet Makers	68	Milliners...	61
Brush Makers ...	7	Coopers ...	4
Provision Merchants ...	5	Bakehouses ...	137
Rag Sorters ...	3	Drug Packing ...	2
French Polishers ...	5	Coach Builders ...	5
Tailors ...	64	Rope Makers ...	2
Marine Store Dealers ...	3	Wood Carvers ...	4
Blacksmiths ...	23	Wool Sorters ...	7
Upholsterers ...	15	Cork Cutter ...	1
Umbrella Makers ...	2	Gun Makers ..	2
Box Makers ...	3	Carpet Repairers ...	5
Surgical Instrument Mak'r	1	Picture Frame Makers ...	2
Fruit Boiler ...	1	Wire Worker ...	1
Plasterers ...	2	Basket Makers ...	3
Hosiers and Knitters ...	13	Tinners ...	14
Wheelwrights ...	10	Locksmiths ...	2
Painters ...	10	Cutler ...	1
Plumbers ...	25	Underclothing Makers ...	14
Printers ...	4	Electrical Engineers ...	3
Sweet Boilers ...	3	Piano Makers ...	3
Cistern Maker ...	1	Firelight Makers ...	2
Clog Sole Makers ...	2	Drysalts ...	3
Belt and Brace Makers ...	8	Boot Upper Maker ...	1
Oil Merchants ...	2	Cycle Repairer ...	1
Rug Maker ...	1	Sign Writer ...	1
Watch Makers & Jewellers	13	Brass Works ...	3
Blind Makers ...	2	Laundries ...	9
Sugar Packers ...	3	Hair Pad Makers ...	7
Metal Engravers ...	3	Machine Makers ...	8
Hair Dressers ...	2	Machine Brokers ...	2
Metal Polish Makers ...	4	Marble Masons ...	5
Chair Maker ...	1	Shoeing Smiths ...	1
Photographers ...	3	Firewood Cutters ...	2
Billiard Table Maker ...	1	Skep Makers ...	2
Ventilating Engineers ..	2	Dentists ...	4
Designers ...	2	Beer Bottlers ...	4
Boot, Shoe, and Clog		Paper Bag Makers ...	2
Makers ...	129	Dry Cleaner ...	1
Weight and Scales Maker	1	Bookbinder ...	1
Dress and Mantle Makers	100	Mineral Water Manuf'rs.	3
Art Needlework...	1	Musical Instrument	
Tripe Dresser ...	1	Maker ...	1
Machine Roller Maker ...	1	Essential Oil Blenders ...	2
Whitesmith ...	1	Curtain Maker ...	1
Total number of Workshops, 899.			

Bakehouses.

There are 137 bakehouses on the Register, against 129 during the previous year, or an increase of 8, and these have been duly supervised and inspected by the District Sanitary Inspectors.

The number of underground bakehouses still remains at 26.

The number of visits paid to the bakehouses during the year was 333, as the following table will show.

Description of Premises	Number on Register	Number of Visits made
Wheat Bread and Muffin Bakers, including Confectioners	125	333
Oat Bread and Muffin Bakers	12	

The bakehouses appear to be kept in a more cleanly condition than formerly, and fewer complaints have been reported during the year than usual.

As usual the largest number of complaints had reference to limewashing, though in that respect there was an improvement on the previous year.

With reference to the neglect of limewashing, there were 19 complaints during the year, also 1 for the illegal occupation of an underground bakehouse, which was promptly dealt with.

Other defects numbered 13, making a total of 32, which, together with one that remained unabated at the end of the year, made a total of 33, all of which were remedied during the year.

The following table shows the number and character of the defects reported, and the number remedied.

Nature of Defects				Number Reported	Number Remedied
Brought forward from last year	...			1	...
Bakehouses requiring Limewashing	...			19	19
Defective Sink Drains	...	...		5	5
Offensive Accumulation	...	...		...	1
Defective W.C.'s	...	...	...	2	2
Sink Drains to disconnect	...	..		1	1
Dirty Floors	...	...	...	3	3
Want of Proper Ventilation	...	...		1	1
Illegal occupation of underground Bakehouse	...	...	...	1	1
Total				33	33

Ice Cream Makers and Vendors.

The itinerant Ice cream makers and vendors, though less in number than formerly, are the most difficult to deal with, many of them being careless and uncleanly in their methods of carrying on their business.

There was occasion to complain especially of two of the above during the year, owing to the dirty condition of their premises, and of an outbuilding in which ice was stored. These were dealt with, and an improvement secured without the necessity of resorting to a prosecution.

The District Inspectors paid 84 visits to these premises during the year.

Offensive Trades.

Under the Public Health Act, the number of offensive trades carried on in the Borough, was as follows:—bone boilers, 3; blood boiler, 1; soap boilers, 2; tripe boilers, 10, making a total of 16, the same number as during the previous year.

These premises have been kept under supervision by the Veterinary Inspector, and there was no special cause for complaint.

Public Health Laboratory.

There were 362 specimens examined in the Public Health Laboratory, against 68 during the previous year.

The following table gives details regarding the specimens examined.

Disease				Number of Specimens	Results of examination	
					Positive	Negative
Tuberculosis (Sputum)	..	..	..	241	72	169
„ (Urine)	...	...	...	10	2	8
„ (Milk)	...	...	...	2	...	
Diphtheria (Swabs)	...	...	...	104	18	86
Typhoid (Widal's)	...	...	...	1	...	1
Blood Counts	...	...	..	2	...	
Pleuritic Fluid	...	..	..	1	...	1
Pus	...	...	...	1	...	1
Total	...	...	...	362		

The large number of swabs examined for diphtheria is accounted for by the large number which were taken from the children attending Haugh Shaw, and All Saints' Schools, during the diphtheria outbreak which occurred in connection therewith; also a large number of swabs were taken from patients in the hospital, for examination before their discharge.

The proportion of diphtheria specimens found to be positive was 17·3, against 23·5 during the previous year.

Milk Supply.

This subject is dealt with by the Veterinary Inspector further on in this Report, and I have very little to add to his remarks.

Considerable improvement in the condition under which this important article of food is produced, has been secured during the last 10 years, although there is still room for even much greater progress in this direction in the future.

The question of cleanliness is about the most important factor necessary in dealing with milk production, yet many dairymen do not seem to realise their responsibility in this respect, and I am afraid will not do so, until the public demand a clean milk supply.

There were 20 samples of milk taken during the year, and tested biologically for tubercle. Of these, five gave positive results, showing that 20 % of the samples taken contained tubercle bacilli. This is rather a high proportion, but the number of samples taken were too few to base any conclusions upon of any definite value; nevertheless, such a percentage of affected samples cannot be altogether viewed with indifference, because

there is no doubt that the consumption of tuberculous milk is of far greater danger to the public, especially the young, than the consumption of tuberculous meat.

The Farmers and Dairymen in this district, I fear, will never be able to free their herds altogether from this disease, at any rate until the cattle in the country generally are free therefrom, because their method of renewing their stock yearly from outside sources, enables this disease to gain an entrance to their herds, however careful they may be in the selection of the cattle they purchase.

Now the Goat is an animal free from tuberculosis, it is not susceptible to the disease, and kept under proper conditions is very cleanly. Here then is an animal which will supply a clean milk, and quite free from tubercle bacilli. Goats milk therefore is ideal for infants, who have to be artificially fed, and in fact for all young children, more especially those belonging to families where there is a predisposition to tuberculosis.

A supply of Goats milk, produced and bottled under proper conditions, would be invaluable in the above cases.

Is there no farmer in Halifax sufficiently enterprising to take this matter up?

Disinfection.

Infectious disease having been less prevalent in the borough during the year, a less amount of work under the above heading was necessary.

In the steam disinfecting apparatus there were 6265 articles of bedding, clothing, &c., disinfected by steam, against 7490 during the previous year.

There were 621 rooms in private houses fumigated with formaldehyde, against 595 during the previous year, and 118 library books were disinfected in the special apparatus provided for that purpose.

Disinfecting fluid was distributed free of charge in cases where notifiable infectious disease occurred, and in this way 200 gallons were disposed of during the year, also 12 tons of disinfecting powder was used during the year in connection with the street gullies and other places.

Schools and Infectious Disease.

The work of the schools were very little interfered with during the year from infectious disease, it not having been necessary to resort to school closure until near the end of the year, owing to the outbreak of diphtheria in connection with All Saints' and Haugh Shaw schools. These schools were closed by order of the Sanitary Authority as follows :—

Disease	Name of School	Date of Closure	Period of Closure
Diphtheria ...	All Saints ...	Nov. 24	4 weeks
do.	Haugh Shaw Girls, Std. 1	Dec. 3	2 weeks

I believe however the Bermerside Open-air and Residential School was closed during May on account of Chicken pox, by the Education Committee.

The following table gives a list of the schools affected with scarlet fever and diphtheria, and shows the number of cases reported in connection with each.

Name of School				Scarlet Fever	Diphtheria	Total
St. Augustine's	...	...		1	2	3
Battinson Road	...	...		3	3	6
Parkinson Lane	...	...		7	2	9
Sunnyside	...	...	...	...	2	2
Christ Church, Pellon	...	...		1	1	2
Moorside	...	...	...	1	...	1
Queen's Road	...	...	...	4	1	5
Haugh Shaw	...	...	...	5	2	7
Siddal	...	...	...	2	7	9
Portland Road	...	...		6	...	6
Holy Trinity	...	...	...	3	...	3
All Saints	...	...	...	...	3	3
Council Secondary	...	...	...	...	2	2
Boothtown	...	...	...	8	2	10
Akroyd Place	...	...	...	2	...	2
Warley Road	...	...	...	7	6	13
Stafford Square	...	...	...	...	5	5
Lee Mount	...	...	...	1	2	3
Pellon Lane	...	...	...	2	2	4
Wainstalls	...	...	...	2	...	2
High School	...	...	...	2	...	2
Warley St. John's	...	...	...	2	...	2
Total				59	42	101

From the above table it will be seen that 42 cases of diphtheria occurred among children of school age, against 44 during the previous year, and of the 111 cases of this disease reported, 37 per cent. were of school age, against 54 per cent during the previous year.

There were 24 suspicious cases of fever reported to this department by the Education authority. These were visited, and 3 cases of scarlet fever were discovered among them.

In connection with 4 schools, 26 rooms were disinfected during the year.

Furnished Rooms, Houses Let in Lodgings.

The number of furnished rooms and houses let in

lodgings in the borough was 186, the same as for the previous year.

These were supervised by the Sanitary Inspectors who paid 481 visits thereto during the year, and 16 were found to be in a dirty condition. Notices were served, and the rooms were cleansed in due course.

House to House Inspection under the Housing and Town Planning Act.

In consequence of the diminished prevalence of infectious disease in the borough, the District Inspectors were able to devote more time to house to house inspection than during the previous year. A total of 832 houses were inspected and reported on, against 774 during the previous year.

Of this number, 253 were found to have defects of some kind or other, while 579 were in a satisfactory condition.

The following is a list of the chief defects found.

Nature of Defects					Number Reported
Defective Drainage and Sanitary Fittings	...	...	...	...	124
Defective Flagging in yards	...	...	...	...	33
Structural Defects	...	...	...	...	52
W.C. and Ashes-tub- place accommodation	{	Defective	...	...	33
		Insanitary	..	...	15
		Insufficient		...	5
Overcrowded	...	...	...	...	3
Defective Light or Ventilation	...	...	...	...	35
Want of Cleanliness	...	...	...	...	3
Dampness	...	...	...	...	42
Others	...	...	...	...	18
Total					363

Of the above 253 houses, the defects found to exist were remedied in 184. In the remaining 69, the necessary work had not been completed at the end of the year. The defects in the latter however will no doubt be remedied without the necessity of making closing orders.

Of the houses inspected during the year, 38 were considered to be in a state so dangerous or injurious to health, as to be unfit for habitation, and representations were made by the Medical Officer of Health to the Local Authority with a view to the making of Closing Orders with regard to the same.

The number of Closing Orders made during the year by the Sanitary Authority, was 12, including one which was reported during the previous year.

Three Demolition Orders, two of which referred to houses which had been closed during the previous year, were made by the Council during the year. In two cases the owners complied with the order, while in the third instance the owner failed to do so. In the latter case, the Borough Engineer was instructed to carry out the work, which was done, and the owner charged with the cost thereof.

Of the 38 representations made to the Sanitary Authority, 27 were only reported at the end of the year, consequently the Closing Orders in reference thereto were only made at the beginning of the current year.

The following is a summary of the work done in connection with house to house inspection during the year.

Number of houses inspected	832
Number of houses in which defects were found to exist	253
Number of houses found to be in a satisfactory condition	579
Number of houses in which defects were not remedied at the end of the year	69
Number of houses considered to be unfit for human habitation	38
Number of representations with a view to the making of closing orders	12
Number of closing orders made	12
Number of houses the defects in which were remedied without the making of closing orders	184
Number of houses which, after the making of closing orders, were put into a fit state for human habi- tation.	0
Number of houses closed (demolished) as unfit for human habitation, closing orders for two of which were made during 1912.	3

Meteorology.

The meteorological station is 625' above sea level, and is under the charge of Mr. Green, the Chief Librarian at Belle Vue.

The following table gives a general summary of the meteorological observations taken during the year.

Mr. Green has supplied me with a general summary of his observations as follows:—

General Summary of Meteorological Observations taken at the Public Library, Belle Vue, from January 1st, 1913, to December 31st, 1913.

By E. GREEN, LIBRARIAN.

LATITUDE OF STATION = 53° 43' N.

LONGITUDE = 1° 52' W.

HEIGHT ABOVE SEA LEVEL = 625 FEET.

1913.	Pressure of Atmosphere in Month.		Temperature of Air in Month.						Mean Temperature.		Vapour.		Mean degree of Humidity, Saturation=100.	Mean Weight of a cubic foot of Air.	Mean Reading of Thermometer.		Wind.										Mean amount of Cloud.	Rain.		REMARKS	
Month.	Mean at 32° F. and Sea Level.	Range.	Highest.	Lowest.	Range.	Mean.			Air.	Dew Point.	Elastic Force.	In a cubic foot of Air.			Maximum Rays of Sun.	Minimum on Grass.	Estimated Strength.	Relative proportion of													
						Of all Highest.	Of all Lowest.	Daily Range.				Mean.						Short of Saturation.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Calm.			
	in.	in.	°	°	°	°	°	°	°	°	in.	gr.	gr.		gr.	°	°													in.	
January	29.705	1.272	50.9	26.4	24.5	41.8	33.3	8.5	37.7	35.6	0.208	2.4	0.3	91	540	63.3	22.8	1.2	2	1	1	11	5	7	5	1	20	8.2	21	3.23	The observations have been reduced to mean values by Glaisher's Barometrical & Diurnal Range Tables, and the Hygrometrical results have been deduced from the seventh edition of Hygrometrical Tables, after corrections for Index errors of the Instruments employed.
February	30.134	1.200	52.2	26.6	25.6	45.3	34.0	11.3	39.9	36.5	0.216	2.4	0.5	84	547.8	84.4	19.8	1.7	2	4	5	4	3	11	5	4	10	7.9	13	1.45	
March	29.564	1.632	54.1	24.6	29.5	45.2	34.1	11.1	39.4	36.2	0.214	2.5	0.5	84	536.7	89.5	19.5	2.1	0	0	1	6	3	16	6	16	4	6.8	24	4.69	
April	29.820	1.068	60.9	30.5	30.4	49.8	37.0	12.8	43.2	40.7	0.254	2.9	0.3	92	537.9	95.9	27.0	1.9	1	11	1	9	3	11	3	6	6	7.2	17	3.80	
May	29.875	0.778	74.4	35.5	33.9	56.8	42.1	14.7	50.8	44.2	0.290	3.2	1.1	74	529.7	117.5	30.4	1.3	0	8	2	7	6	6	5	12	8	6.0	13	2.80	
June	30.030	0.806	74.0	41.8	32.2	61.3	46.9	14.4	55.7	45.9	0.309	3.7	0.7	75	530.4	113.1	35.1	1.8	3	4	0	4	3	8	10	14	5	6.6	13	1.78	
July	30.057	0.632	72.0	42.9	29.1	61.5	48.3	13.2	56.4	48.4	0.340	3.8	1.6	71	526.3	114.4	36.5	1.2	7	14	0	0	1	1	6	16	8	6.1	12	1.11	
August	30.047	0.580	76.5	40.2	36.3	63.7	48.7	15.0	57.8	49.1	0.350	3.9	1.4	69	525.4	111.0	32.4	1.0	3	9	0	2	2	4	7	14	11	5.6	8	1.24	
September	29.943	1.160	75.8	38.0	37.8	61.5	48.7	12.8	56.0	49.9	0.360	3.9	1.3	75	525.7	114.5	29.8	1.5	4	15	1	13	3	2	1	5	8	6.8	12	1.64	
October	29.858	1.162	62.9	34.0	28.9	54.1	44.6	9.5	49.9	44.4	0.293	3.5	0.6	83	530.0	93.2	26.7	1.4	4	14	1	5	6	13	0	4	7	6.4	15	1.87	
November	29.763	1.212	54.5	32.9	21.6	49.6	41.4	8.2	45.6	42.0	0.267	3.1	0.5	86	534.5	83.9	28.3	2.2	0	1	0	0	2	13	12	16	7	5.8	23	3.56	
December	30.014	1.404	52.6	21.2	31.4	43.7	36.2	7.5	39.7	35.6	0.208	2.3	0.5	80	546.2	64.4	21.1	2.0	9	1	0	0	0	6	17	11	7	7.5	18	3.00	
Annual Means	29.900	1.075	63.4	32.8	30.5	52.8	41.0	11.5	47.6	42.3	0.275	3.1	0.75	80	534.3	95.4	27.4	1.6	3	7	1	5	3	8	6	10	8	6.7			

The Mean Monthly Readings of the Earth Thermometer, four feet below the surface, were as follows:—

January, 43°	March, 42°	May, 46°	July, 53°	September, 54°	November, 49°
February, 41°	April, 43°	June, 50°	August, 55°	October, 52°	December, 48°

Highest Readings = 55° from August 4th to August 11th and 21st to 31st. Lowest Readings = 41° from February 1st to 7th and 22nd to 28th.

Rain fell on 189 days, and measured 30.17 inches.

The summer of last year was very dry, and rain fell only on 189 days during the year, against 208 during the previous year.

The amount of rain collected was 30·17" against 44·04" during the previous year.

The following table gives the rainfall for the past twenty years.

Year	No. of Days Rain Fell	Amount of Rainfall
		inches.
1894	158	30·31
1895	149	33 78
1896	172	32·02
1897	187	29·72
1898	182	29·49
1899	153	35·33
1900	205	39·68
1901	179	29·41
1902	191	28·03
1903	219	44·25
1904	191	29·32
1905	187	25·94
1906	207	33·84
1907	208	34·00
1908	184	30·65
1909	199	35·69
1910	213	36·62
1911	196	29·01
1912	208	44·04
1913	189	30·71

The following table shows the amount of rainfall collected at the 10 stations distributed over the gathering grounds of the Halifax Corporation.

HEIGHTS ABOVE SEA LEVEL IN FEET.

	1380	1350	1325	1375	1040	1050	1060	990	815	795	568
1913	Walshaw Dean *	Midgley Moor *	Warley Moor *	Ovenden Moor *	Walshaw Dean Lodge	Widdop	Castle Carr Lodge	Ogden	Ramsden Wood	Albert	Gibbet
	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.
January ...	5·23	4·57	4·78	4·30	5·74	4·58	4·65	4·59	3·09	3·38	4·18
February ...	2·08	2·45	2·16	1·76	2·42	2·05	2·26	1·93	1·73	1·49	1·62
March ...	5·65	6·00	5·53	4·59	6·60	5·35	5·59	5·19	4·52	4·45	5·01
April ...	4·90	4·79	4·44	4·42	5·51	5·19	4·66	4·61	4·22	3·80	4·24
May ...	3·67	3·73	3·55	3·77	4·08	4·39	3·60	3·57	3·21	2·74	2·84
June ...	2·27	2·43	2·33	2·11	2·78	2·36	2·51	2·23	1·96	1·95	1·86
July ...	1·62	1·44	1·58	1·44	1·65	1·67	1·77	1·48	1·47	1·23	1·06
August ...	1·90	1·62	1·56	1·51	2·11	2·11	1·53	1·40	1·47	1·35	1·24
September ...	1·71	2·23	2·20	2·33	1·88	1·59	2·35	2·15	1·76	1·59	1·72
October ...	2·89	2·97	2·93	3·05	2·73	2·40	2·82	2·81	1·70	1·77	2·10
November ...	6·09	5·44	5·00	5·93	6·79	5·55	4·78	4·98	4·09	4·26	4·02
December ...	3·11	3·45	3·17	3·42	3·26	2·89	2·97	3·15	3·09	3·15	3·37
Totals ...	41·12	41·12	39·23	38·63	45·55	40·13	39·49	38·09	32·31	31·16	33·26

Average Rainfall over all the Guages, 1912	...	54·05
Do. do. 1913	...	38·19
		<u>15·86</u>

Miscellaneous Matters.

To the Borough Fever Hospital I paid regular visits during the year. The Smallpox Hospital, and other

departments under the control of your Committee were visited from time to time.

During the early part of the year, and before the appointment of a full time Clinical Tuberculosis Officer, I regularly attended the meetings of the Sanatorium Sub-Committee of the local National Health Insurance Committee, and advised them regarding the cases of tuberculosis which came before them for consideration.

During the year I paid 19 visits to the slaughter-houses with the Veterinary Inspector, for the purpose of giving advice regarding the fitness of meat for consumption and the seizure thereof.

In connection with a Knackery at Swales Moor, several complaints were made during the year from a neighbouring quarry regarding a nuisance caused by smells arising therefrom. I paid several visits to this Knackery, and found the complaints to be well grounded. The attention of the owner was called to this, and he took steps to abate this nuisance, so that it was not necessary to take any further action in the matter.

I paid 21 special visits to various parts of the borough for the purpose of enquiring into the sanitary condition thereof, and also visited 4 bakehouses during the year.

I paid some 10 visits to suspicious cases of fever, and 6 special visits to schools in the borough.

The various conferences which took place in the early part of the year, and the visits to various sites for the purpose of securing a suitable one for a local sanatorium, together with the preparation, fitting up, and furnishing the sanatorium, entailed a great deal of extra work during the year.

For the Tramways Committee I examined 214 men during the year, and granted a certificate in each case, and for the Highways and Gas Committees I examined and reported upon several workmen in connection with the Workmen's Compensation Act.

Borough Fever Hospital.

On January 1st, 1913, there remained in the hospital three cases of diphtheria, ten of typhoid fever, and seven of scarlet fever, or a total of 20 patients, and there were admitted during the year, a total of 123 cases, including 24 from outside districts, against a total of 195, which included 71 non-residents during the previous year.

Certain wards were also set apart for the use of consumptive cases, and 68 were admitted during the year.

The following table shows the number of infectious cases that were admitted of each kind, and the mortality from the same.

Disease	Number Admitted	Deaths	Case Mortality per cent.
Diphtheria	62	14	22·5
Scarlet Fever	48	...	...
Enteric Fever	12	3	25·0
Erysipelas	1	...	...
Total	123	17	13·8

It will be observed from the above table that the mortality from diphtheria was rather high, many of the cases admitted being of a very virulent type.

There were no deaths from Scarlet Fever in the hospital during the year, and owing to the less prevalence of the disease, only 48 cases were admitted, against 133 during the previous year.

Four diphtheria patients died within 24 hours after admission, and one of the deaths which occurred from diphtheria, and one from typhoid, were of persons not belonging to the borough.

The following table shows the number of cases that have been admitted to the fever hospital since the year 1881.

Year	Small-pox	Cholera	Typhus Fever	Typhoid Fever	Scarlet Fever	Diphtheria	Others	Total
1881	16			17	34		2	69
1882	13		3	24	15		5	60
1883	2		2	26	8		5	43
1884	1			29	23		2	45
1885	15		1	16	23		4	59
1886	3			18	24		3	48
1887	3			18	54		1	76
1888	5		1	25	28		7	66
1889	4			54	33			91
1890				35	39		7	81
1891		1		47	47		6	101
1892	188		1	17	15		1	222
1893	340			4	1			345
1894	15			15	39		1	70
1895				39	25		7	71
1896				56	30		20	106
1897				32	237		3	272
1898				28	341			369
1899				38	515			553
1900	3			44	250		9	306
1901	3			18	597	12	43	633
1902	1			30	365	7		403
1903	140			24	219	17	4	404
1904	84			22	349	25	6	486
1905	57			29	246	22		354
1906				20	110	30		160
1907				43	42	45	1	131
1908				36	145	26	1	208
1909				21	340	27		388
1910				17	167	53		237
1911			1	25	203	36		265
1912				32	133	30		195
1913				12	48	62	1	123

The practice of detaining mild cases of scarlet fever four weeks only, has been continued during the year with satisfactory results, and since the appointment of Dr. Taylor as my assistant, it has been made possible to examine bacteriologically, the throats of all patients suffering from diphtheria, before their discharge.

I desire to express my appreciation of the manner in which the Matron, Miss Robison, has managed the Institution during the year, and the great care and attention which the nurses have bestowed upon the patients.

Notification of Births Act.

The Notification of Births Act has been in force in the borough since March, 1908, and 1680 were reported, against 1627 during the previous year.

The actual number of births registered was 1871, consequently 89 per cent. of the births which occurred were notified, the same percentage as during the previous year.

Notifications were received of 58 still-born infants, against 56 during the previous year.

The work of visitation under the Notification of Births Act is carried out partly by the voluntary aid of the Halifax Public Health Association, a band of active ladies who have done an immense amount of useful work in this direction.

The Committee of the Association is constituted as follows :—

Councillor Dr. Branson, Chairman, Health Committee
 Dr. J. T. Neech, Medical Officer of Health
 Miss Alice M. Thompson. Lady Health Visitor
 Mrs. E. N. Whitley, Lady Superintendent
 Mrs. C. Smithson, ,, ,,
 Mrs. J. Collinson, ,, ,,
 Mrs. Hack, ,, ,,
 Mrs. Crabtree, ,, ,,
 Lady Fisher-Smith Mrs. Ward
 Mr. A. W. Whitley Mrs. A. Clay

Miss Thompson, the Lady Health Visitor, acts as Secretary to the Association.

Periodical meetings are held by the Committee, for the transaction of the business of the Association, and an Annual Public Meeting is also held.

His Worship the Mayor, Alderman W.H.Ingham,J.P. presided over the Annual meeting last year, and it was also addressed by Dr. Williams, of Sheffield, Dr. Taylor, and others.

The voluntary lady visitors not only visited a certain number of babies for a period of twelve months after their birth, but now also, in certain special cases, until the children are two years of age.

For the purpose of carrying out this work, the borough is divided into five districts, each of which is under the charge of a Lady Superintendent.

The following table gives the names of the Lady Superintendents, and the districts which they control.

District.	Lady Superintendent
Ovenden, Pellon and Kingston Wards	Mrs. E. N. Whitley
Akroydon and North Wards	Mrs. C. Smithson
Central and West Wards	Mrs. J. Collinson
South and East Wards ...	Mrs. Hack
Skircoat and Southowram Wards	Mrs. Crabtree

The following are the names of the Assistant Lady Visitors.

Mrs. Stirk,	Mrs. Hepworth,	Mrs. Sharp,
Mrs. A. Seed,	Mrs. Taylor,	Mrs. Greenwood,
Mrs. Wilson,	Mrs. Balme,	Mrs. Mitchell,
Mrs. Smith,	Mrs. Watkins,	Mrs. Tidswell,
Mrs. Meskimmon,	Mrs. Holroyd,	Mrs. Pickles,
Mrs. Ackroyd,	Mrs. Mitchell,	Mrs. Wade,
Mrs. Horsfall,	Mrs. Burnett,	Mrs. Kidd,
Mrs. Wadsworth	Mrs. Hyde,	Mrs. Shuttleworth,
Mrs. G. Seed,	Mrs. Wilson,	Mrs. Hanson,
Mrs. Cockroft,	Mrs. Townsend,	Mrs. Culpan,
Mrs. C. Mitchell,	Mrs. Sutcliffe,	Mrs. Hirst,
Mrs. Whitaker,	Mrs. Helliwell,	

The total number of visits paid by the voluntary lady visitors was 1,900, against 1,411, during the previous year.

LADY HEALTH VISITORS' REPORT.

During the year I have paid 1074 visits to Notified Births, 369 visits to Guild cases and others.

In the course of my visitation I have found 142 houses fairly clean, 38 dirty, the remainder clean.

There were 1680 births notified, of which 954 were attended by Medical Men, and 726 by Midwives.

We have 35 Voluntary Assistant Visitors, the number of visits paid by these ladies are as follows :—

Ovenden, Pellon, and Kingston Wards	62
Akroydon and North Wards	741
Central and West Wards	338
South and East Wards	416
Skircoat and Southowram Wards ...	343

Of the 726 babies, 702 were breast fed at birth, 24 only being bottle fed.

Our "Babies Welcome Club" has been of great benefit to the mothers since its inauguration in 1908. Its object is to save by weekly payments, for the time of confinement, and 1d. in every 1s. is added as a means to encourage saving. Sums varying from 2s. to £2 have been saved, but last year the membership dropped to 24 from 67 the previous year.

This was of course owing to the 30s. Maternity Benefit, and the workers sickness Insurance of 7s.6d. per week, for four weeks.

We are however trying to persuade the Mothers to continue to save, and to use the money to pay a woman to come in for a few hours during the early days after confinement, as we find many women do themselves serious harm by sitting up to wash and dress the elder children.

Our nourishment fund for providing meals for needy mothers both before and after confinement, has not been so much needed this year. The Maternity benefit again and good trade being the helpful factors.

Our weekly Sewing Meeting for mothers has more than exceeded our expectations. These things take time to establish, but when once the mothers understand that real help is given, they are very glad to come. We have 35 members on the books, with an average attendance of 18.

The mothers pay $\frac{1}{2}$ d. per week. They receive a bun and a cup of tea. Material is provided, and help given in cutting out and sewing. When the garment is made, the mother is allowed to take it home. About 200 garments were made last year.

We also have a little Saving Club for buying more elaborate garments such as kilts, first trousers, little dresses, etc. These are made by the Voluntary Visitors. We make out a regular plan for the season, four visitors come down each week to prepare the tea, nurse the babies, and in spare moments sew little garments for sale. A total of £3 3s. 8d. was taken in weekly pence, and for garments sold. Material was bought costing £2 8s. 11d., so we had 16s.9d. in hand.

Our five superintendents have been kind enough to provide the teas at these meetings for which we are much indebted to them. We should like here also to thank

those ladies who have given us material, and Dr. Burn for allowing us the use of the Good Shepherd Mission Room free of charge, and those of our visitors who have so faithfully helped at the meetings

In the winter months we find we cannot get the mothers to attend regularly, as the weather is not always suitable for young babies to be out, so we have kept in touch with them by giving cookery teaching in their own homes. Fifteen of those who attended the sewing meetings voluntarily gave in their names, and a number of plain dinners, the cost of which did not exceed 1s. have been prepared and cooked. Our thanks are due to the eight Visitors who so kindly undertook this work.

We received a list of the Poor Law cases and these are put under supervision, but they are the most difficult cases we have to deal with,, as they are constantly on the move, and it is almost impossible to follow them up.

During the winter months we arranged a course of lectures for our Visitors, Mrs. C. H. Smithson kindly allowing us the use of her lecture room.

Subjects :—

Whooping Cough and other infections. Dr. Neech.

Food values. Mrs. C. Clay.

Tuberculosis, with lantern slides. Dr. Taylor.

Hygiene. Miss Briggs.

Diseases and Defects of Children under five years of age. Dr. Taylor.

As reported last year our Association has extended its visiting period to a second year of the child's life, thus the supervision is continued at a most important time, when the infant may be showing signs of "Rickets" or other preventable diseases.

As this extended visiting was not started until August of last year, we have not a record of the visits to hand.

We regret to have to report, in spite of our efforts a large increase in the Infant Mortality rate for the year, viz :—103 per 1,000 infants born. We are not alone in this increase; undoubtedly the cause of it was the prolonged drought of last summer, and the increased deathrate from diarrhoea and enteritis consequent thereon.

In spite of this result we go forward to another year's work, with the belief that the voluntary workers of the Association are a real force in the social life of our Town, and that much good is done both to the babies and their mothers, which cannot be measured by statistics.

Midwives Act.

The Midwives' Guild, formed under the auspices of our Association, continues to do good work. Monthly lectures are given by a trained Midwife, and are much appreciated by those who attend.

The Midwives, almost without exception, are now daily taking the temperature and pulse of their patients during the lying-in period.

I paid 54 visits to the midwives during the year under review, and as a result have obtained the following particulars relative to their case books, of which some of them are exceedingly well kept.

Number on Register	Case Books			
	Well kept	Fairly well kept	Not Up-to-date	No case book
22	12	7	2	1

Two of the midwives whose registers were not up-to-date, cannot themselves write, and are dependent upon relatives to write up their cases.

The midwives cordially support my efforts in advising the mother in the care of herself and infant.

There were **22** midwives who notified their intention to practise within the Borough during the year, two of whom are qualified by examination, the rest by long practise.

There were three notices received during the year of sending for medical aid, and 58 of still-born infants

The following is a list of the midwives registered at the Health Office during the year 1913.

Name	Address
Sutcliffe Ellen	6, Spindle Street
Halstead Frances Ellen	3, Aspinall Street East, Siddal
Blakey Louisa	33, Commercial Road
Wade	66, St. Peter's St., Boothtown
Woodhead Fanny... ..	40, Chestnut Street
Smith Clara	40, Winding Road
Ogden Emma	42, Burnley Road
Robinson Mary Ann	14, Ashbourne Grove
Wood Mary Elizabeth	9, Fern Street, Boothtown
Shelley Emelina	6, Ellen Royd
Wilson Elizabeth Ann	1, Shoesmith's Buildings
Arnold Mary Ann..	14, Exchange Street
Connew Sarah	22, Clay Street, Hanson Lane
Marsland Emma	16, Cherry Street
Warren Harriet	17, Spring Grove, Newstead
Hoyle Elizabeth	27, Copley Hall Street
Smith Emma	21, Causeway Foot
Lake Lucy	Bolton Street, New Bank
Aaron Hannah	7, Lane Ends, Wheatley
Brook Emma	5, Hope Street, Shelf
Goodall	2, Thorn View, Luddenden
Rushworth	18, Westfield terrace

VETERINARY INSPECTOR'S REPORT.

Dairies, Cowsheds, and Milkshops.

Mr. J. Pollard, M.R.C.V.S.; D.V.S.M., has submitted to me the following report on the work which he has carried out during the year.

The number of cowsheds and milkshops on the register is as follows :—

Cowsheds	...	507
Milkshops	...	65
		—
Total		572

There was therefore the same number of cowsheds, and a decrease of three in the number of milkshops during the year.

The number of Dairy farmers and Purveyors of milk on the register was 359, the same as the previous year.

A number of cowsheds were again altered or reconstructed with a view to making the same comply with the requirements of the Regulations, and in this way, six cowsheds were dealt with during the year, which number, together with 122 previously reported on, make a total of 128 cowsheds which are now, in a structural sense, entirely satisfactory.

In previous reports the state of affairs has been fully reported on, and I do not see any prospect of improvement generally until further powers are granted to Local Authorities to deal with the same.

During the past year samples have been taken from purveyors for the purpose of bacteriological examination, and the following samples were reported to cause tuberculosis :—

No. 1. Within the Borough. As a result of the report, a visit was made to the farm, and the owner stated 8 cows had been sold in the interval between the sample being taken and examination of the cows. He admitted that one of the eight cows which had been sold had a diseased udder.

No. 2. Outside the Borough. In this case, three dairies were concerned. All the cows with the exception of one, appeared to be in good health and condition. Samples were taken of mixed milk, also from the cow which was not in good condition due to lameness. The report of the biological test was negative. One owner admitted having sold one cow between the date of sample being taken and the date of visit.

No. 3. Outside the Borough. In this case a visit to the farm revealed a case of clinically tuberculous cow, which was duly reported to the Local Authority concerned for action under the Tuberculosis Order.

No. 4. Outside the Borough. A visit to the farm was made, the cows were examined, and the usual enquiry made if any changes had taken place between the date of taking the sample,

and visit. The answer was in the negative. Two cows were suspected, viz : one with a diseased quarter, and another clinically,

The cases were reported to the Local Authority concerned, under the Tuberculosis Order, and I am informed both the cows were subjected to the Tuberculin test, and both reacted, but understood no further action was taken, beyond prohibiting the milk from these two cows for some time.

A further sample was taken in due course, and reported negative, but knowing how purveyors carry milk about in small cans, I do not know whether the sample could be considered a representative one. It would have been more satisfactory to have known that the cows were slaughtered, or the milk from the said cows subjected to animal inoculation and proved negative.

During the year under review I paid 405 visits, and the Inspector for Illingworth district 508 visits, a total of 913, to the various cowsheds in the Borough, and the District Inspectors paid 184 visits to the registered milkshops.

In consequence of these visits a total of 79 defects were discovered and reported, and 66 remedied, as the following table will show

Nature of Defects				Number Reported	Number Remedied
Not Registered	...	...	...	4	4
Want of Light	...	...	...	13	8
„ Airspace	...	...	...	10	4
„ Ventilation	...	...	...	6	4
Defective Floors	...	...	...	11	7
Dirty Stands	...	...	...	4	4
Cowsheds to Limewash	...	...	...	27	27
Overflowing Liquid Manure Tanks	...	...	...	...	5
Defective Middensteads	...	...	...	2	1
Swine in Cowshed	...	...	...	2	2
Total				79	66

The County Borough of Halifax is exceptional in having such a large acreage, and a large number of farms.

No census of milch cows within the borough has been taken, but I consider an approximate estimate will be about 2,500, and I examined 1,600 during the year. Several of those will have been examined twice, so that leaves a number which were not examined.

Details of these inspections are set out in the following table.

INSPECTION OF CATTLE.						
Date of Inspection	No. of Folio	Cattle and Condition			Condition of Shed	Remarks
		Number Examined	Udders Diseased	General Condition		
Jan.	9 239	8	*1	Fair condition, but dirty	Bad	*Indurated quarter
"	9 239	5		Fair	Moderate	
"	9 239	10	*1	"	1 Moderate, 1 poor	
"	9 239	15		Good and clean	2 Moderate, 1 poor	
"	22 247	10		Fair condition, few dirty	Moderate	
"	22 247	7		Good and clean	"	
"	22 247	11		Fair	"	
"	22 247	5		"	"	
"	22 247	13		"	Poor	
"	22 247	12		Good	1 Moderate, 1 poor	
"	22 247	12		Fair, few dirty	Moderate	
"	27 250	9		Fair	Poor	
"	27 250	11		"	"	
"	27 250	5		Fair, few dirty	Good	
"	29 251	28		Fair, but dirty	Moderate	
"	29 252	2		Good	"	
"	29 252	5		Fair	"	
"	30 252	15		"	3 Poor	
"	30 252	21		"	"	
"	30 252	10		Good	moderate	
"	6 256	7		Fair, but dirty	"	
Feb.	6 256	5		"	"	

Feb.	6	256	Fair	Poor	
"	6	256	Fair, few dirty	Moderate	
"	6	256	"	"	
"	12	260	Good, but dirty	"	
"	12	260	Good, 1 dirty	"	
"	12	260	Good, but dirty	Good	
"	12	260	Fair, but several dirty	Moderate	
"	12	260	"	"	
"	12	260	4 Good, 2 thin and dirty	"	
"	12	260	Good, few dirty	1 Good, 1 poor	
"	14	262	Fair, but few dirty	Moderate	
"	14	262	Good	1 Good, 1 poor	
"	14	262	Fair, but dirty	Moderate	
"	18	264	3 Good, 1 fair	"	
"	19	265	Good, few dirty	Poor	
"	19	265	Fair, few dirty	Moderate	
"	19	265	4 Fair, 2 sick	Good	
"	21	266	Fair, but dirty	Moderate	
"	24	267	"	"	
"	27	269	"	1 Moderate, 1 poor	
"	28	270	"	"	
"	28	270	12 Fair, 1 thin, several dirty	Poor	
"	28	270	Fair, but dirty	"	
"	28	270	"	Moderate	

*Floor defective

Inspection of Cattle.— <i>continued.</i>						
Date of Inspection	No of Folio	Cattle and Condition			Condition of Shed	Remarks
		Number Examined	Udders Diseased	General Condition		
March 5	273	9		Fair, but dirty	Moderate	
" 5	273	14		"	"	
" 5	273	3		Good, 1 dirty	"	
" 5	273	4		Fair, 2 dirty	Poor	
" 5	273	12	1	Fair, several dirty	1 Moderate, 1 poor	* Atrophied quarter
" 7	274	3		Fair	Poor	
" 7	274	4		"	Good	
" 7	274	5		Fair, but dirty	Moderate	
" 7	274	10		"	Good	
" 12	276	3		"	Moderate	
" 12	276	5		"	"	
" 12	276	14	2	Good	1 Good, 2 poor	* Indurated quarters
" 13	277	26	5	Fair, but dirty	Poor	* Indurated quarters
" 13	277	9		Fair and clean	Moderate	
" 4	291	18	1	Fair, several dirty	2 Moderate, 1 bad	* Indurated quarter
April 4	291	15		Fair, few dirty	1 Moderate, 1 poor	
" 4	291	3		Fair	Moderate	
" 9	294	4		Fair	Poor	
" 10	295	10		"	Moderate	
" 16	299	20		"	1 Moderate, 1 poor	
" 16	299	12		"	Moderate, stands dirty	
" 17	300	10	1	"	Good, stands dirty	
" 17	300	2		Thin	Good	
" 17	300	11		Fair, few dirty	1 Moderate, 1 poor	
" 17	300	6	1	Fair	"	* Indurated quarter

April 17	17	300	4	1	3 Fair, 1 thin	Good	*Atrophied quarter
"	17	300	15	1	Good and clean	"	
"	17	300	8	1	Fair	"	*Indurated quarter
"	23	304	5		Fair, 2 dirty	"	
"	23	304	3		Good	"	
"	23	304	14	1	Fair	"	*Indurated quarter
"	23	304	15		"	"	*1 Sold
"	25	305	17		Thin, *2 tuberculous	2 Moderate, 1 poor	*Chronic mastitis
"	25	305	21		Fair	1 Moderate, 2 poor	*Indurated
May	2	311	10	*1	"	Poor	
"	2	311	38	*1	"	2 Moderate, 3 poor	*Slaughtered under tuberculosis order [1913
"	12	316	5		Fair, *1 tuberculous	Moderate	"
"	12	316	1		See folio 305. No exam. 17.		"
"					1 Tuberculous		
"	23	316	6		Fair, *1 Tuberculous	Moderate	"
June	4	316	4		3 Good, 1 tuberculous	"	"
"	9	335	17		Fair, *1 thin	Poor	"
"	9	335	6		Good	Moderate	*Due to diseased foot, Milk exam. [biologically
"	9	335	8		"	"	
"	16	339	8		Fair	"	
"	17	340	12	*1	"	1 Moderate, 1 poor	Not re-lime washed *Atrophied quarter
"	19	342	7		"	moderate	
"	19	342	12	*1	"	"	*Atrophied quarter
"	20	343	11	*1	"	"	*Indurated quarter Slaughtered for beef
"	25	346	11		Fair, *1 tuberculous	"	*Slaughtered under the tuberculosis order [1913
July	10	349	8	2	6 Good, *2 thin	"	"
"	14	351	15		Fair	"	"
"	14	351	9		8 Fair, *1 tuberculous	Good	"
"	16	353	11		Good	Moderate	"
"	30	6	12		11 Fair, *1 tuberculous	"	"
"	30	6	10		9 Fair, *1 tuberculous	"	"
Aug.	1	7	14		13 Fair, *1 tuberculous	Poor	"
							W.R.

Inspection of Cattle—Continued.

Date of Inspection	No. of Folio	Cattle and Condition			Condition of Shed	Remarks
		Number Examined	Udders Diseased	General Condition		
Aug. 5	10	14	*1	Fair, 1 rather thin	Moderate	W.R. Report of T.B. in milk *Suspected of tubercle, but removed for *Indurated quarters [slaughter
" 6	11	14		Fair	1 Good, 1 poor	
" 19	19	18	*1	"	1 Good, 1 moderate	
Sept. 3	24	17	*2	"	Moderate	*Tuberculous Floor defective
" 4	25	7		6 Fair, 1 rather thin but appeared [healthy	"	
" 25	37	9		Fair	"	
" 25	37	6		Fair condition	1 Moderate, 1 poor	Floor defective
Oct. 2	41	5		4 Fair, 1 thin but appeared healthy	Moderate	
" 2	41	6		5 Fair, 1 thin	"	
" 9	45	14		Fair	2 Moderate	Floor defective
" 9	45	6		Fair, but dirty	Moderate	
" 10	46	16		Good	"	
" 10	46	14		Fair	2 Moderate	Floor defective
" 10	46	12		"	Moderate	
" 10	46	15	1	Good	"	
" 15	49	10		9 Good, *1 thin	"	Floor defective
" 16	50	5		Fair	2 Moderate	
" 21	53	7		Good	3 Poor	
" 22	54	15		"	Moderate	Floor defective
" 22	54	16		Fair	"	
" 22	54	19		Good, but few dirty	Poor	
" 24	55	4		Fair	Moderate	Floor defective
" 24	55	6		Fair, but dirty	"	
" 24	55	8		Fair	"	

Slaughterhouses.

There are eight private slaughterhouses in the borough, being the same number as the previous year. All have been kept in a satisfactory condition.

During the year I have paid 951 visits to the Abbatoirs, and the actual number of animals slaughtered there, together with the approximate number dealt with in private slaughterhouses during the year was as follows :—

PUBLIC SLAUGHTERHOUSES				
Cattle	Calves	Sheep and Lambs	Pigs	Total
7,646	2,524	20,886	4,986	36,042
PRIVATE SLAUGHTERHOUSES (Approximate)				
312	30	1,120	60	1,522

None of the animals slaughtered at the private slaughterhouses during the year were condemned.

There were 567 separate seizures of meat and offal during the year, and the following table shows the number of carcasses condemned, and the total weight of the same.

	Cattle	Calves	Sheep & Lambs	Pigs	Total
Number of Animals killed	7,646	2,524	20,886	4,986	36,042
Do. condemned	12	14	16	40	82
Weight of those condemned in lbs. ...	5,510	695	755	5,256	12,216

The following table furnishes particulars of the diseases and other conditions which caused the condemnation of the meat during the year.

	Parturition	Tuberculosis	Inflammatory Diseases	Jaundice	Swine Fever	Dropsical	Immature	Septicæmia	Cadavers	Otherwise unsound	Putrefaction
Cattle		10								2	
Calves			6				5	1		2	
Sheep			3			2			2	9	
Pigs	1	26	3	5	3			1		1	
Rabbits											82

In addition to the above there were 19 seizures of fish, fruit, &c., and the following table shows the weight of the various kinds of food destroyed.

Kinds of Food Destroyed	Quantity in lbs.
12 Carcases of Beef	5510
Beef not in Carcase	263
14 Carcases of Veal	695
16 Carcases of Mutton and Lamb	755
40 Carcases of Pork	5256
Pork not in Carcase	1300
82 Rabbits	206
Bacon	15
Fish	3368
Fruit	48
Other Foods	244
Offal	6865
Total	24525

Tuberculosis, as heretofore, was the chief cause of the seizure and destruction of meat, although comparison with the year 1912 shows a great reduction, as the following table will show. It will be noted that the amount of meat destroyed on account of tuberculosis in 1912, was the highest during the past ten years.

Year	Total amount of Meat destroyed	Amount destroyed on account of Tuberculosis
1904	30,654	19,826
1912	28,335	20,099
1913	20,865	14,942

Total amount of meat destroyed... ... 20,865 lbs.
 Total amount of meat destroyed
 on account of tuberculosis ... 9,686 lbs.
 Total amount of offal destroyed
 on account of tuberculosis ... 5,256 lbs.
 Total amount destroyed on account of tuber-
 culosis 14,942 lbs.
 Total amount destroyed from other causes... 5,923 lbs.

During the year an attempt has been made to prevent the slaughter of immature calves.

The greater part of the meat destroyed during the year was voluntarily surrendered by the owner for destruction, and in 11 cases it was necessary to obtain a Justice's Order.

There were no prosecutions during the past year. Two cases were referred to the Committee.

The following table shows the number of visits made during the year.

Description of Premises				Number of Visits
Public Slaughterhouses	...	...		951
Private Slaughterhouses	...	...		85
Borough Market	...	...	...	290
Wholesale Market	...	...	...	289
Fasting Sheds...	...	...	...	205
Potted Meat Houses	...	...	...	134
Tripe Boiling Houses	...	...	...	62
Butchers' Shops	...	...	...	2469
Fried Fish Shops	...	...	...	35
Cowsheds	...	...	...	405
Other Visits	...	...	...	134
Total				5059

In addition to the above I have paid frequent visits of attendance on the horses of the Health Committee, at the Hall Street and "Goux" Depots, examined new purchases, and had frequent calls on my services by other Committees; also the Diseases of Animals Acts, to which has been added the Tuberculosis Order 1913.

SALE OF FOOD AND DRUGS ACTS.

Mr. J. A. Dewhirst, F.I.C.; F.C.S., the Borough Analyst, has submitted to me the following report upon the samples he has analysed for your Committee during the year 1913.

There were 243 samples of food and drinks taken under the Food and Drugs Acts, and the Regulations during the year, and 7 samples under the Rag Flock Act. The following table gives the number analysed per 1,000 of the population in recent years, and the percentage of adulteration.

YEAR	Number of Samples Analysed	Percentage Adulterated	Estimated Population of the Borough	Number of Samples Analysed per 1,000 of the Population
1910	251	6·0	101,500	2·47
1911	246	4·9	102,000	2·41
1912	250	5·6	102,000	2·45
1913	243	4·9	102,000	2·38

The importance of work under the Acts grows rapidly, and constant attention to current phases of adulteration is really necessary, and to the ever deepening intricacy of sophistication, and consequent elaboration of analytical methods of detection. "One of the most valuable services that local authorities perform towards the community is that of supervising the food supplies" (*Lancet*) and yet, so unostentatiously is this done, that no one realises the full effect of it.

The following table shows the kind of samples dealt with, together with the results of the analyses.

Article	Total	Genuine	Adulterated	Doubtful	Percentage adulterated
Milk	122	117	5	0	4·1
Butter	12	12	0	0	·0
Margarine	12	12	0	0	·0
Vinegar	16	12	1	3	6·2
Rice	12	12	0	0	·0
Cream	15	15	0	0	·0
Beer	8	8	0	0	·0
Buttered Tea Cakes . . .	15	8	6	1	40·0
Fruits, Dried and Tinned	5	5	0	0	·0
Olive Oil	14	10	0	4	·0
Cream of Tartar	12	12	0	0	·0
Totals	243	223	12	8	4·9

Eleven different classes of commodity were sampled, as against thirteen last year. No doubt a larger range might be covered with advantage, and yet this would almost entail a larger total of samples, for on this point the Local Government Board Report for 1911, says (regarding Butter) “only 12 in one town, and 16 in

another were analysed for a total population of 160,000. The taking of one or two samples per month in such great towns, cannot possibly enable local authorities to determine whether adulteration is being practised in those districts," and again in the same report, quoting the Medical Officer of Health for Islington, "It is only with great difficulty that the vendors of adulterated butter are detected."

The percentage of adulteration is lower than last year, also lower than that of the whole country. It must be remembered however that most of your samples are taken with all official formalities, which tends to keep down the percentage found adulterated, for to quote the Local Government Board Report again,—“Evidence is accumulating, that the unofficial form of sampling, when judiciously carried out, is by far the best method, for the detection of offenders.” In one district, out of 119 informal butter samples, no less than 26% were found to be adulterated, which shows the large amount of fraud going on in our midst.

There were four instances of prosecution in Halifax during the year. Three of them were for adulterated Buttered Tea Cakes, resulting in convictions and fines. The fourth was in respect of a milk which was 9 % deficient in fat below the minimum limit fixed by legal Regulation. In this case the Justices thought that the milk had not been tampered with, and was genuine, hence dismissing the summons.

In doing so, no doubt the Bench were influenced partly by the statements of witnesses that they had done nothing to the milk, but I cannot help thinking that if they had had no evidence before them that genuine milk was sometimes just below the standard, the statements

of the witnesses would have had little weight. The defence in short probably won their case by reason of this published evidence as to the occurrence of poor but genuine milk. And this evidence is practically confined to the results obtained at the Garforth Experimental farm, belonging to the Agricultural Department of the Leeds University. Let me again take an extract from the Local Government Board Report, in which the Analyst for the County of Derby says "It is time that the public were made aware that the statements of interested parties, to the effect that difficulty is experienced in producing milk of a quality to satisfy the standard requirements, are not based on facts. Instead of there being any difficulty in practice of obtaining milk up to the standard, I do not think it is going too far to say that it would be difficult to induce a herd of cows, properly fed, and in healthy condition, to yield milk of so low a quality, as would correspond to the minimum standard."

This is precisely my own opinion, after an experience of many years, over eight of them as public analyst in Halifax, testing the milk all the year round as supplied by the farmers of our district. Without doubt the farmers can, and do produce milk, which at all times satisfies the requirements. What grounds, then, has a farmer for excusing his poor milk, when on the same day, under identical conditions, his fellow farmers produce good milk? The position has already been established that any liquid obtained from the udder of a cow is now necessarily milk as demanded by the purchaser. It is quite possible to obtain poor milk by keeping poor cattle, or by under-feeding, or even by improperly feeding, with material unsuited to the production of good milk. But I take it that the farmer.

like any other manufacturer, must understand his business and produce a satisfactory article, or take the consequences. Now as to the Garforth farm results, which, in this district at least, have gone far to stultify the Food and Drugs Acts as regards milk. Last year I took the trouble to visit and examine this farm, to see the kind of cattle and the herbage they feed on. I was already familiar enough with the published reports of experiments tried on the animals. Let me say at once, that, just as I expected, the fields on which the cows were grazing were totally different in character from anything found about Halifax. The land is heavy, the grass tufted, wiry, and without any succulence. In short it is extremely poor grass land, quite unsuited for a dairy farm. There is no other dairy farm near, and were it not that a dairy branch is necessary for instructive purposes, it would not be there. I have it by the word of those engaged on the farm in responsible positions that it is a poor dairy farm. Moreover, much of the grass is purposely left unmanured and unlimed, in order to show visiting farmers and the students the difference between treated and untreated land. Even the treated land could not compare with the Halifax fields which I had just left, and to which I presently returned. Moreover half the cows are known to be tuberculous, yet the University chemists in Leeds have seen fit to manœuvre these unfortunate animals in scientific fashion, anon dosing them with dyes, in attempt to colour their milk, an intention always steadily defeated by the patient beasts, then feeding them with varying foods, and milking them at varying times. Can it be wondered that quaint results have been obtained in view of these conditions and their miserable pasture.

It must be granted however that by some saving grace, the statement is eventually made, in a later report, that if the cows are milked at approximately equal intervals, they will **always** give good milk, (I think, if the Garforth cows will do it they are heroines), also that the results obtained are only true for such conditions as exist at Garforth. In spite of all this we shall no doubt continue to hear the old consequential statements duly propounded in Courts as to the Garforth farm, where they keep the best of cows, under the best of conditions, and yet obtain poor milk! So how can the poor Halifax farmers be expected to do any better? I can only add that they do do better, thus constituting a pretty severe indictment of the odd ones found wanting, and of the Garforth results. It is a pity that these have been published at all, as they are of academic interest only, Yet they are so naturally invested with great weight coming from such a source, and so easily misinterpreted and misrepresented, as to afford a powerful weapon in the hands of a man who sells unsatisfactory milk. In that way one of the aims and objects of the institution which is to elevate agricultural practice is not only missed, but the reverse effect obtained. The "Lancet" says "there is a widespread impoverishment of this most important part of the food of the people."

Instead of labouring to show how cows can be made to give poor milk under poor conditions, there is better work to be done for instance in missionary work on the bacterial and cleanliness side of the milk question, demonstrating to farmers improved methods of practical procedure, and the advantages resulting. This is already done in the case of butter making, and could be extended.

An Agricultural College in Scotland found that milk sampled at various cowsheds, varied enormously,

the lowest having 260 bacteria in one drop, and the highest 60,000, thus showing very forcibly how much dirtier were the methods and surroundings in one case than in another.

Also it was found that the bacteria in milk kept 24 hours in an ordinary warm house temperature were over seven times as numerous as when it was kept cool (10° c).

Most interesting work has also been done by the City Bacteriologist of Liverpool, Prof. J. M. Beattie, at the Earl-road Milk Depot, where for some months experiments have been conducted in the electrical treatment of milk for the purpose of destroying bacteria. He finds that by this treatment, only 7 out of 10,000 bacteria remained alive, and that the pathogenic bacteria were killed as well as the non-pathogenic, for tuberculous milk was rendered non-tuberculous. At the same time the chemical constitution of the milk was not altered and it remains unimpaired as a food, even for infants. In my view this work may have revolutionary effect on the milk supply in general. On the face of it one would think that if millers can afford to bleach their flour electrically, dairymen should be able to treat their milk electrically when such benefits ensue.

Whilst some of the official samples of milk are each year found adulterated, there are other commodities which are more fortunate and escape scot free, perhaps because fewer samples are taken. This year buttered tea cakes and vinegar accompanied milk in its unenviable distinction. The case of the tea cakes shows only too sadly that sophistication and substitution occur very readily when little or no chance of detection is anticipated.

Vinegar was specially referred to in my last report, and I am of opinion that some makers overstep even the

wide limits allowed by the Local Government Board's latest definition. Perhaps more will come of this in the future, and I am giving some attention to the matter.

One other article, Olive Oil to wit, supplied four very doubtful samples, but any adulteration, if existent at all, had been done very skilfully, and in restricted amount. There is a good deal of doubtful Olive Oil about, additions being made of two or three other oils carefully selected to compensate each others' defects, whilst the mixing is so easy, involving no cost in labour, that quite small additions are remunerative. The fats and oils are so similar chemically, speaking generally, that their analysis and differentiation is difficult; whilst advances are constantly being made in their manipulation, to alter them or deprive them of any distinguishing features they may naturally possess.

A very important discovery has recently been made whereby a liquid oil may be made a hard fat or indeed a fat of any consistence. It is done by hydrogen with the aid of a catalytic agent usually finely divided nickel. Already whale oil amongst others is being largely treated in this manner, deprived of its fluidity and unpleasant flavour, and we may shortly expect to get it in our margarine and butter, for of all oils it approaches most nearly to the chemical composition of butter fat. This is the latest exemplification of the unfortunate analyst's increasing difficulties. In the matter of preservatives also, this feature is strongly marked. Special efforts are made from time to time to introduce new preservatives which are circularised to interested trades as undetectable by analysts. Of these we have had recently one called "Mystin," another "No. 2," another "Suffectus," in three forms, and also "Purit," in two forms. Fluorides are being pushed in this connection, and certainly they

are difficult to find in small quantities unless very carefully sought for. Concerning them Prof. W. E. Dixon of Cambridge University says that even in minute quantities they accumulate in the body (after the manner of lead) and produce poisoning, the first symptoms being nausea and diarrhœa. They also alter the composition of the bones.

Dr. R. Larkin, Police Surgeon at Southwark, stated at a recent inquest, that preservatives in food, were a common cause of Appendicitis. Without doubt our food is too much tampered with. The case of flour seems specially to call for mention. We have it nowadays "bleached" and "improved." As "improvers" we have acid phosphate of lime, and potassium persulphate to increase the "strength" of the flour. Bleaching with nitrous oxides is almost universally practised. Dr. Hamill, in a special report to the Local Government Board says that "it would in present knowledge be unwise to conclude that the process is devoid of risk." The Medical Officer to the Board says in this connection that "the relation which may exist between apparently very minute alterations in the nature of staple food materials and the production of great and far reaching changes in nutrition has been strikingly demonstrated in recent investigations into certain obscure disorders of metabolism, of which the disease known as beri-beri may be taken as an example, and the time has arrived for taking a wider view than has hitherto been customary, of the dangers to health which may arise from the sophistication of food stuffs. With this object in view, and with a view also of placing on a more definite basis, matters relating to composition and purity of food materials, the Board are taking steps to promote legislation enabling them to make further provision for ensuring the purity

of articles of food, and to prevent misdescription of them." I might add that the disease beri-beri is caused among such people as the Japanese solely by eating as a staple food, rice which has been deprived of its coating, in short as we eat it in England. The coating contains a minute amount of a principle having a powerful, in fact an essential effect in keeping the body in health. Were it not that we in England do not rely so largely on rice, but have a very mixed diet, which supplies the deficiency, we should suffer in the same way.

There are three food bills at present before Parliament or in preparation, viz :—The Milk and Dairies Bill; A Sale of Food and Drugs Bill; and the Pure Food Bill (to deal specially with flour and bread).

In my private capacity I have had under notice some fictitious coffee—patents are frequently being taken out for the manufacture of such,—some under-strength spirits, and powdered olive stone adulteration in both pepper and compound liquorice powder.

Rag Flock Act, 1911.

Half a dozen samples were taken under this Act, and one of them was found to contain 35·4 grains of Chlorine per 100,000. As the limit is 30 grs. per 100,000, this exceeded it, and came under the heading of "dirty and unfit for use." A later batch, sampled at the same place, was however found to be just below the limit, so no action resulted.

This is without doubt an excellent Act, for there has been unrestricted use of the filthiest rubbish for stuffing mattresses and even pillows, cushions, etc. Anything from dirty floor sweepings of tailors' shops, to

rags picked out of ashplaces, has been good enough for some makers, quite without cleansing of any sort.

The Fertilizers & Feeding Stuffs Act, 1906.

Some very useful work was done under this Act. Nineteen samples were taken in all, and of them, one was found to be an absolute fraud, four were not genuine, but with extenuating circumstances, in five cases the provisions of the Act had not been duly observed as to giving analyses of the composition of the article with each packet or purchase, whilst in nine cases the article was genuine.

We have been instrumental in bringing up to scratch, several well-known and extensive manufacturers, and in one case a widely boomed article, which we had occasion to censure privately last year, has practically ceased to exist.

As in 1912 we have not proceeded against any case, although this could well have been done, but suitable representations have been made as required.

The Act has now been in operation seven years, but some traders are slow to learn, and others show determined opposition, which indicates the necessity for such an Act, else rubbish, or an inferior article is sold, deficiency in quality being made up for by exaggeration in advertisement.

Very wide use of the Act could be made by farmers in the borough at practically no cost to themselves, but as a class they do not learn by reading, to teach them orally is a more desperate enterprise, and even to offer them something for practically nothing, is not always to achieve success.

SHOP INSPECTOR'S REPORT.

The Inspector under the Shops Act has submitted to me the following report on the work he has carried out during the year under review.

During the first four months of the year under review, I spent a portion of each week visiting shops to ascertain if children were being employed about the business of the shop, and if so, whether their employment was in conformity with the Bye-laws made under the Employment of Children's Act, 1903. I found 230 boys and 6 girls who attended school full time, 20 boys and 5 girls employed who attended school half time, also 14 boys who were employed under the Factory and Workshops Acts as half-timers, and were afterwards employed in shops, and 35 boys and girls under age (11 years), or (12 years for Lather boys) were being employed, and in two cases the burdens were too heavy for a child to manage. I pointed this out to the shopkeeper, as it is contrary to Sec. 3 of the Act.

For Bye-law purposes I visited 406 shops, and observations numbering 3,225 were kept upon shops employing children. As a result of this I found 228 cases of contraventions of the Bye-laws.

Two of the offenders were prosecuted, one for employing a boy under age (10 years), and the other for employing a boy 53 minutes longer than the time allowed.

The difficulty in the employment of children is the short time they remain in employment, the longest term is generally not more than six months, and often two or three boys will be employed during that time.

Early in March the Shops Act, 1913, became operative, and its application is optional on the part of the Refreshment House keeper, whether the business be for the sale of Refreshments or Intoxicants. The particulars necessary to the working of the Act came to hand late in April, and I proceeded to visit the Hotels, Public Houses, and Temperance Hotels, to ascertain if those affected were going to remain under the provisions of the Shops Act, 1912, or would adopt the provisions of the new Shops Act, 1913.

For this purpose I visited 231 Hotels and Public Houses and 7 Temperance Hotels. Of these, about 112 of the former, and 6 of the latter employed assistants, as shown by the following table.

	Assistants		Young Persons under 18 years of age	
	Male	Female	Male	Female
On Licensed Premises	85	132	...	2
In Temperance Hotels	...	12	...	...

The option given by the new Act has been taken full advantage of, for only one licensed house, one Temperance Hotel, and one Café have elected to come under its provisions, the provision for one whole holiday out of every three Sundays, and an additional half holiday on Sunday being the principal objection.

The number of shops in the borough is approximately 2,582, being 20 more than last year, which is partly accounted for by the inclusion of several trades or businesses not included before, viz :—Motor Car Dealers, Carriage Builders, Cartwrights, etc., also by shops not

included in previous list, in country or residential districts.

The following is an approximate list of Assistants and Young Persons (under 18 years of age) employed in shops etc.

SHOP ASSISTANTS		YOUNG PERSONS (UNDER 18 YEARS OF AGE).	
Male	Female	Male	Female
777	649	253	95

I found it necessary to warn 153 shopkeepers because the provisions of Section 1 referring to Assistants' half-holiday had not been complied with, and because of contraventions of the same. Section (1) referring to Assistants meal times, 51 warnings were given.

Appended is a list of Closing Orders in force in the Borough and the area covered by each Order

Trades or Business		Time of Closing					
		Mon. p.m.	Tues. p.m.	Wed. p.m.	Thur p.m.	Fri. p.m.	Sat. p.m.
1	Hairdressers and Barbers Closing Order (1905). Area: The Borough.	8	8	8-30	1	8-30	10
2	Halifax Closing Order (1906)— Boot and Shoe Dealers Painters, Decorators and Wallpaper Dealers ... Butchers and Meat Purveyors ... Area: The Borough.	8 8 7	8 8 8	8 8 8	1 1 2	9 8 10	10 8 11
3	Halifax Closing Order (1909)—Hosiers, Hatters, Gentlemen's Outfitters, Drapers, Ladies & Chil- dren's Outfitters, Silk Mercers, Mantle and Waterproof Dealers, Furriers, Milliners, Fur- niture Dealers, Carpet and Fent Merchants, Tailors, Oilcloth and Linoleum Dealers, and including Auctioneers for sale of above trades... Area: The Borough, except Warley, Copley and Northowram Wards, also Illingworth, except portion to the south-east of High Level Railway between Wood Lane and Holmfield	8	8	8	1	9	10
4	Halifax Jewellers, &c., Shops Closing Order, (1912)— Watchmakers, Jewellers, Silversmiths, Pawnbrokers selling Watches, Clocks, Jewel- lery or Silver Plate ... Area: The Borough.	8	8	8	8	8	10

Thursday is still recognised by the majority of shopkeepers closing their premises on that day for the weekly half-holiday, but a number of the smaller Grocers and Confectioners have changed their half-holiday to other days, their object being in most cases, the sale of goods on the Thursday for which the majority of shops of a similar class are closed, and by these means secure extra turnover.

The many different days for half-holidays are very confusing to the public, and awkward for the mixed businesses who keep open for exempted articles, because the public, finding they can purchase at a shop which has a different half-holiday, expect to make the same purchases at the mixed business, open only for the sale of a few goods. A general recognised weekly half-holiday for all the shops would be a boon to the traders and public alike, and the irritation so often called forth by the present indefiniteness would be avoided.

In addition to the two prosecutions mentioned above, H.E.B., a Jeweller, etc., was prosecuted for the sale of a watch 24 minutes after the closing hour for this class of shop, and was fined 5s. and costs 5s.6d.

For contraventions of the Shops Acts and Bye-laws, 23 printed or typed warnings were sent in cases where the oral warning was not considered to meet the case or otherwise had been ignored.

For the early closing of shops, observations numbering 26,114 have been kept upon shops, under the various Early Closing Orders, and for the half-holiday closing and mixed business purposes, 30,750 observations were made to ascertain if the different shops were complying with the half-holiday regulations, and also if the mixed businesses were displaying the notice and adhering to

its conditions. For the Assistants' weekly half-holiday, observations numbering 9,087 were kept upon shops employing assistants, to ascertain if the employees were away from the premises after 1-30 p.m., for their half-holiday.

The following is a list of visits paid to the shops for various purposes.

Registration Visits (being visits to Shops for particulars to enter in Registers and general inspection purposes)	944
Special Visits (being interviews and inspection visits)	1164
Half-holiday Visits (being entries into shops on the day selected for the half-holiday, total or partial)	420
Assistants Half-holiday visits (being entries into Shops and Refreshment Houses for assistants half-holiday purposes) ...	370
Children's Bye-laws Visits (being interviews or entries into shops to explain or ascertain if Bye-laws were being observed)	406

The following table of contraventions of the Shops Acts 1912 and 1913, and of the Bye-laws, reveals the fact that though a large number have obtained the necessary notices, there are still a good percentage of traders, who through carelessness or ignorance, more often the former, have rendered themselves liable to prosecution. The meal time and assistants' half-holiday contraventions reveal the same fact, for when the alteration of a notice would justify the course they take, in many cases the alteration is omitted, and a technical offence is

committed, which may in their case appear trivial, but is vital to the general working of the Act.

Another point about which 24 shopkeepers have been warned is that of employing Young Persons (under 18 years)—who have been employed in a Factory or Workshop during the same day,—for longer hours than are allowed by Section 2.

The greater number of warnings have been issued to the Market stall holders, and to Hairdressers, while in a few cases other traders have been warned, but the above are the worst offenders.

Shops without Assistants' Half-holiday Notice (Sec. 1, Form 1)		137
Shops without Young Persons' Notice (Sect. 2)		23
„ Mixed Business Notice (Sect. 10, Form 4)		125
Shops without Seats for Female Assistants (Sect. 3)		4
Total ...		289
Contraventions of Mealtime Provisions ...		51
„ Assistants' Half-holidays ...		153
„ Half-holiday Closing ...		314
„ Early Closing Orders ...		184
„ Young Persons' Hours ...		24
„ Children's Bye-laws ...		228
Total ...		954
Warning (typewritten or printed)		23
Prosecutions :		
Under Children's Bye-laws		2
Under Early Closing Order		1
Total ...		3

The review of the first complete year's working of the Shops Act 1912 has been more difficult owing to the initiatory work connected with the new duties under the Children's Bye-laws and the Shops Act 1913, but this work completed, the gradual systematisation of the various duties, to avoid overlapping, as much as possible, were proceeded with, and the registration visits where necessary, are followed up by a second visit, to ensure the instruction being carried into effect, and every endeavour is being made to give due attention to the varied duties which demand attention under the Shops Acts, Orders, and Bye-laws.

COUNTY BOROUGH OF HALIFAX

THE

Sanitary Inspector's Report

FOR THE

YEAR ENDED 31st DECEMBER, 1913.

*To the Chairman and Members of the
Health Committee.*

GENTLEMEN,

I have the honour and pleasure of laying before you for your consideration my Thirty-ninth Annual Report on the operations of the Health Department for the year ended December 31st, 1913.

TOWN HALL, HALIFAX,

1914.

HEALTH DEPARTMENT.

Summary of Work done.

Number of Houses Visited under the Housing and Town Planning Act	832
Number of Visits to Lodging Houses and Furnished Rooms	670
Number of Visits to Houses with reference to Cleanliness, Overcrowding, &c.	172
Number of Visits to Houses with reference to Defective Drainage	7402
Number of Visits to Houses with reference to Infectious Diseases... ..	1042
Number of Notices Served	480
Rooms Disinfected	1042
Cases Removed to the Hospital	123
Infectious Diseases reported	298
Letters served (referring to Nuisances, &c.) ...	195
Summonses taken out... ..	9
Smoke Observations taken	538
Old Ashpits altered to Goux and Water Carriage System	16
Goux Closets registered	23

It must be remembered that many nuisances are frequently included under one notice, and therefore the number of nuisances represent considerably more than the number of notices.

Removal of Nuisances.

The following table shows the nature of nuisances registered, and work carried out after mere verbal notice.

Nature of Nuisances.				Number Registered
Defective Sink Drains	...	...	...	182
„ „ Pipes	...	...	..	24
„ „ Syphon Traps	...	...	...	21
„ Basement Drains...	...	...	...	75
„ Yard Drains	...	...	...	31
„ Urinal Drains	...	...	...	8
„ W.C. Drains	...	...	...	65
„ Area Drains	...	...	...	20
Made-up Sink Pipes	...	...	...	109
Defective Sink Stones	...	..	...	31
Made-up Bath Pipes	...	...	...	10
„ Lavatory Pipes	...	...	...	10
„ Basement Drains	...	...	..	29
„ Water Closets	...	...	...	19
„ Yard Drains	...	...	..	33
„ Urinal Drains	...	...	..	2
„ Gullies	...	...	...	40
„ Private Street Drains	...	...	...	17
„ Intercepting Traps	...	...	...	21
Untrapped Basement Drains	...	..	...	15
„ Sink Drains and Pipes	...	...	...	25
„ Area Drains	...	...	...	6
„ Yard Drains	...	...	...	2
„ Bath Pipes	...	...	...	4

NUISANCES—*Continued.*

Nature of Nuisances	Number Registered
Untrapped Lavatory Pipes	2
Drains not efficiently Trapped :—	
Sink Drains... ..	6
Yard Drains	2
Sink Drains and Pipes requiring Disconnecting ..	94
Defective Fall-pipe Drains	60
„ Fall-pipes	59
„ Spouting	84
„ Roofing	12
Broken Pot and Iron Traps	21
Insufficient Supply of Water to Closets ...	10
Nuisances from Water in Cellar	68
„ Want of Drains	11
„ Swine	1
Houses Overcrowded	17
„ requiring Limewashing	28
Accumulations of Offensive Matter	49
Privies requiring Limewashing	22
Dirty Passages	23
Insufficient Privy Accommodation	11
Offensive Ashpits and Privies	82
„ Goux Closets	179
„ Ash Tubs	510
Doors off Closets	33
Want of Ash Tub Places	6
Doors off Ashes Tub Places	55
Dilapidated Closets	36
Ashpits requiring Re-construction	13

NUISANCES—*Continued.*

Nature of Nuisances	Number Registered
Miscellaneous	60
Convert Goux Closets to Water Closets ...	61
Offensive Street Gullies	16
Damp House Walls	33
IN FACTORIES.	
Offensive Smoke	3
„ Condition of Closets	15
Insufficient Privy Accommodation	19
Want of Screens to Water Closets	4
Insufficient Light and Ventilation to Water Closets	2
Defective, Made-up and Untrapped Drains ...	20
Made-up Water Closets	43
„ Sink Drains	6
Nuisance from Gas Engine exhaust	1
Closets opening direct into Workroom ...	2
Goux Closets to convert to W.C's.	5
Offensive Urinal... ..	1
IN WORKSHOPS.	
Rooms requiring Lime-washing	30
Insufficient Ventilation	6
Defective Water Closets	2
„ Drains	1
Insufficient Closet Accommodation	4

NUISANCES—*Continued.*

Nature of Nuisances	Number Registered
Dilapidated Goux Closets	1
No Copy of Abstract	1
Dirty Floors	4
Workrooms Overcrowded	4
Offensive Fumes... ..	1
Closets Opening Direct into Workroom ...	4
Goux Closets converted to W.C.	1
BAKEHOUSES.	
Bakehouses requiring Lime-washing	19
Defective Sink Drains	6
Sink Drains to disconnect	1
Dirty Floors	3
Illegal Occupation of Underground Bakehouse ...	1
Defective Water Closets	2
Want of Ventilation	1

Night Scavenging.

The following table shows the number of ashpits cleansed during the year, and the number of loads of manure and rubbish collected.

Month			Number of Ashpits emptied	Loads of Soil	Loads of Rubbish	Total Number of Loads
January	...	...	104	77	22	99
February	...	...	188	128	50	178
March	...	...	227	138	39	177
April	...	...	187	85	74	159
May	...	...	198	117	75	192
June	...	...	174	136	54	190
July	...	...	275	181	38	219
August	...	...	185	133	41	174
September	...	...	258	106	72	178
October	..	...	258	139	53	192
November	...	...	213	104	35	139
December	...	...	185	123	14	137
Total...			2452	1467	567	2034

The total number of ashpits cleansed during the year was 2,452, as against 2,627 in the previous year.

TABLE SHOWING THE NUMBER OF ASHPITS WITHIN
THE BOROUGH, DECEMBER 31st, 1913.

District	Wards	Ashpits with Privies	Dry Ashpits	Total
1	Akroydon and North ...	40	47	87
2	Ovenden and Illingworth	233	24	257
3	Central and East ...	20	73	93
4	West and South ...	5	165	170
5	Skircoat and Southowram	17	13	30
6	Pellon and Kingston ...	5	32	37
7	Copley	96	35	131
8	Warley	188	19	207
9	Northowram	149	...	149
	TOTAL	753	408	1161

9 Ashpits with privies have been altered to the W.C. and Goux System.

2 additional Ashpits with privies and 3 dry Ashpits have been entered on the books.

Goux Scavenging.

The following table shows the number of closet tubs and loads of ashes collected during the year.

Month				Number of Closet Tubs Collected	Loads of Ashes Collected
January	...	...	...	54151	2054
February	...	...	...	49078	1955
March	...	...	...	49400	1945
April...	...	...	...	53252	2241
May ...	...	...	...	49860	1947
June...	...	...	...	51026	1733
July ...	...	...	...	55524	1855
August	...	...	...	50360	1569
September	...	...	...	53260	1787
October	...	...	...	55188	1945
November	...	...	...	49496	1905
December	...	...	...	51151	2084
TOTAL ...				621746	23020

The above represents 29,606 loads of night soil as against 28,201 and 23,020 loads of ashes as against 24,056 for the preceding year.

The number of additional closets registered is 23 being a decrease of 9 on the number registered during the year 1912.

The following table shows the number of Goux closet tubs registered since the commencement of the Goux system.

Year	Number of Closet Tubs	Number Registered during each year
1871	1102	1109 in 15 months
1872	1895	786
1873	2440	545
1874	2820	380
1875	3088	268
1876	3316	228
1877	3769	453
1878	4277	508
1879	5858	576
1880	5071	218
1881	5552	481
1882	6057	505
1883	6506	449
1884	7405	899
1885	8049	644
1886	8727	678
1887	9327	600
1888	9831	504
1889	10446	615
1890	11098	652
1891	11644	546
1892	12068	419
1893	13047	984
1894	13450	403
1895	13797	347
1896	14145	348
1897	14444	299
1898	14881	437
145 Tubs returned in connection with property pulled down.		
1899	15287	551
1900	15974	687
1901	16397	461
38 Tubs returned.		
1902	16808	411
1903	17164	356
1904	17428	264
1905	17662	234
1906	17823	161
1907	17920	97
1908	17975	55
1909	18038	63
1910	18103	65
1911	18140	37
1912	18172	32
1913	17999	23
196 Tubs returned.		

During the year 12 closets have been erected in connection with new property, and 11 have been altered from the old system.

Streets Scavenging.

Table showing number of streets and miles requiring sweeping in each ward.

WARDS	Number of Streets	Number of Lineal Miles of Setting	
		Miles	Yards
East	93	7	1133
Central	41	4	1069
South	58	7	744
West	40	5	421
North	41	4	1513
Akroydon	34	5	715
Southowram	39	7	61
Skircoat	43	5	1717
Copley	9	7	1638
Kingston	24	2	1518
Pellon	28	4	54
Ovenden and Illingworth ...	33	12	780
TOTAL	483	75	803

Streets Scavenging.

Table showing number of lineal yards and miles swept during the year in each ward.

Wards				Number of Lineal Yards swept	Miles	Yards
East	...	...	...	3278431	1862	1311
Central	...	...	...	1244514	707	194
South	...	...	...	1976972	1123	492
West	...	...	...	866709	492	789
North	...	...	...	876285	497	1565
Akroydon	...	...	...	455026	258	946
Southowram	...	...	...	635926	361	566
Skircoat	...	...	...	619455	351	1695
Copley	...	...	...	35282	20	82
Kingston	...	...	...	310896	176	1136
Pellon	...	...	...	388797	220	1597
Ovenden and Illingworth Part swept by Halifax Gang				1069811	607	1491
TOTAL				11758104	6680	1304

Streets Scavenging.

The subjoined table gives at a glance the work done in this department during 1913.

Number of Streets swept	...	...	...	46664
Lineal yards swept	...	...	...	11758104
Square yards swept	...	...	...	93996203
Number of Streets watered	...	...	...	8375
Loads of Water used for that purpose	...	...	...	7945
Loads of Sweepings gathered	...	...	...	9619
Loads of Snow removed from the streets	...	...	...	6865
Number of Gullies emptied	...	...	...	239259
Garbage removed from Market Hall	...	...	...	1218
Loads of Ashes and Sand put on streets	...	...	...	168
Gullies Flushed	...	...	...	4025

During the year 158 loads of garbage have been removed from fishmongers, fried fish shops, and greengrocers.

Birks Hall Tips.

Table showing the number of loads of ashes and rubbish tipped during the year.

NAME				Number of Loads
Goux Department	...	...	...	19557
Private Firms	...	...	...	3120
Highways Committee	...	...	...	160
Total	...	...	...	22837

Charlestown.

Loads of ashes from ashes tubs, 1,528.

ANALYSIS OF REFUSE COLLECTED IN THE BOROUGH
OF HALIFAX DURING THE YEAR 1913

			No. of Loads
From Wet and Dry Ashpits	...	...	2034
From Ashes Tubs	...	...	23020
From Goux Closet Tubs	...	...	29606
Sweepings gathered from the Streets, and Refuse from Gullies	...	...	9619
Garbage removed from Market Hall		...	1218
Garbage from Fried Fish Shops	...	...	158
Total Number of Loads			65655

Smoke Observations.

The following table shows the number of Smoke Observations taken during the year, and the average number of minutes of dense smoke emitted.

	Number of Observations taken	Average Number of minutes of Dense Smoke emitted
Number of Observations taken	538	
Number showing moderate Smoke or <i>nil</i>	} 320	
Number of Observations taken for a period of 60 minutes, each showing Dense Smoke	} 218	
Number of Observations show- ing Dense Smoke above the maximum adopted by the Committee	} 4	
Average number of minutes of Dense Smoke emitted from Chimneys	}	0·85

The number of observations taken during the year is 538. Four of these showed dense smoke above the maximum allowed by your Committee.

The average number of minutes of dense smoke emitted from the chimneys is 0·85.

Table showing the number of Infected Houses visited by the District Inspectors.

WARDS	Typhoid Fever	Scarlet Fever	Puerperal Fever	Diph- theria	Erysipelas	Cerebro Spinal Fever	Poliomy- elitis
Ovenden ...	1	5		7	4		
Akroydon ...		15	1	2	3		1
North ...		3		2	12		
Central ...		5	1	3	2		
West ...	2	6		13	7		
South ...	1	14		3	2		
East ...	1	3		1	4		
Southowram	4	4	1	24	3		
Skircoat ...	2	8		28	5		
Copley ...		7		1	1		
Pellon ...	2	7		5	5		
Kingston ...	1	21		21	6	1	
Illingworth ...	1	2		1	2		
Northowram	1	2					
Warley ...		7			1		
TOTAL ...	16	109	3	111	57	1	1

Table showing number of Infectious Diseases removed to the Borough Fever Hospital by the District Inspectors, during the year 1913.

WARDS	Typhoid Fever	Scarlet Fever	Diphtheria	Erysipelas	Total
Ovenden ...	1	1	4		6
Akroydon ...		7			7
North ...		3			3
Central ...		2	1		3
West ...	1	3	3	1	8
South ...		6	1		7
East ...	1	1	1		3
Southowram ...	4	2	19		25
Skircoat ...		1	13		14
Copley ...		1			1
Pellon ...	2	3	2		7
Kingston ...		4	6		10
Illingworth ...	1				1
Warley ...		4			4
Out of Borough	2	10	12		24
TOTAL ...	12	48	62	1	123

Disinfection.

The following table shows the number and description of the articles disinfected at the Disinfecting House, Stoney Royd, during the year.

Description of Articles				Number of Articles
Beds	...	...	...	482
Mattresses	...	...	...	364
Pillows	...	...	...	842
Sheets	...	...	...	728
Bolsters	...	...	...	396
Blankets	...	...	...	931
Counterpanes	...	...	...	378
Carpets and Rugs		...	...	11
Drawers and Hose		...	...	424
Flannel Vests, Dresses and Petticoats			...	572
Mats and Sundries		..	...	797
Dressing Gowns and Shawls			...	76
Coats	...	...	...	145
Cushions	...	...	...	10
Trousers	...	...	...	51
Waistcoats	..	...	...	27
Miscellaneous	...	...	...	31
TOTAL				6265

Canal Boats.

The Inspections are made periodically by the Chief Sanitary Inspector.

The number of boats inspected during the year 1913 was 35.

In all cases where females were on board proper provision was made for the separation of the sexes. Of the 35 boats inspected there were 4 with women, and 1 with a woman and child on board.

The generally satisfactory condition of the boats has been well maintained. Of this number 34 were found to conform with the Acts. One boat was going in for repairs. There has not been a single case of sickness on board during the year.

All boats were free from bilge water, ventilation was fairly good, and good provision was made for the storage of water.

The boats plying in this district are registered either at Goole, Mirfield or Leeds, it has not being necessary to make provision for registration.

Number of Boats Inspected	Number Registered to carry	Number of Males on board	Number of Females on board	Total
35	233	70	5	75

Table showing Prosecutions under the Sale of Food and Drugs Act, Public Health Act, Dairies, Cowsheds, and Milkshops Order, Shops Act, and Children's Bye Laws.

Date	Defendant's Name	Nature of Offence	Decision of Court			Remarks
			Penalties	Costs	Total	
			£ s. d.	£ s. d.	£ s. d.	
Jan. 7 ...	Fred Wade, High Lees Farm, Mixenden	Selling Milk, adulterated with 25 % of added water and 16 % deficient in Milk Fat	10 0 0	0 10 6	10 10 6	
Jan. 14...	Jonas Rushworth Hairdresser, 19 Lydgate, Northowram	Employing a boy under the age of 12 (Children's Bye Laws)	0 5 0	0 10 1	0 15 1	
March 14	James Robert Gardiner, 22 Highfield Place	Breach of Public Health Act, to abate a nuisance arising from a defective nine inch pipe drain in basement	1 0 0	0 6 0	1 6 0	Order to abate within 14 days.
March 28	Walter Smith, Hairdresser, 52a St. James's Rd.	Working a boy 53 mins. after 8 p.m. (Children's Bye Laws)	0 5 0	...	0 5 0	

May 23...	Elizabeth Fleming 8 Gibbet Street	Selling three Tea Cakes supposed to be buttered but which really had spread on them Margarine (Food & Drugs Act)	0	4	0	0	16	0	1	0	0	
June 6 ...	Charles Henry West, 265 Gibbet Street	Selling 3 Buttered Tea Cakes. On analysis the 'butter' was found to be nothing but Margarine	1	0	0	0	16	0	1	16	0	
June 6 ...	Sarah Anderson Gertrude Fox, 95 Pellon Lane.	Selling 3 Buttered Tea Cakes On analysis the 'butter' was found to be nothing but Margarine	1	0	0	0	16	0	1	16	0	
July 15...	Frank Walton, Rosemary Farm, Siddal	Keeping Pigs in a Cow- shed, under the Dairies, Cowsheds, & Milkshops Order	0	5	0	0	5	6	0	10	6	
Aug. 20	Wallace Wilkinson 40 Illingworth Road	Selling Milk 9 per cent deficient in fat	...				...		...			Dismissed
Oct. 10...	Henry Edwin Bedford & Co. Ld. 24, Market St.	Breach of Shop Hours Act. Selling a watch after closing time.	0	5	0	0	5	6	0	10	6	

Prosecutions.

Under the Sale of Food and Drugs Act and the Public Health Act.—The number of prosecutions during the year was 5 against 6 in the previous year. The total fines including costs amounted to £14 16s. 6d. as against £19 16s. 0d.

One prosecution under the Dairies, Cowsheds, and Milk-shops Order, for keeping pigs in a cowshed, penalty and costs 10/6. Three prosecutions under the Shops' Act and Children's Bye Laws. The total penalties and costs amounted to £1 0s. 7d.

Vans occupied as Dwellings.

All vans occupied as dwellings have been regularly inspected, and were found to be in a clean condition and free from disease.

Smoke Observations.

The number of smoke observations is 538 same as in the previous year. The average number of minutes of dense smoke emitted during one hour's observation was 0·85 against 1·01, during 1912, which is 0·16 less than that of the previous year.

Streets Scavenging.

The number of streets cleansed was 46,664, against 43,649 in 1912, and 43,750 in 1911. The weather having been favourable accounts for the difference in the number cleansed. The number of loads of sweepings collected was 9,619, against 9,306 in 1912, and 9,537 in

1911. There were 6,856 loads of snow removed from the streets, against 6415 in the previous year, and 28 loads in 1911.

Town Planning.

During the year 832 houses have been inspected against 774 in the year 1912. Defects were found in 253, and 579 were satisfactory.

Demolition orders were made in 3 cases.

Rag Flock Act, 1911.

Six samples have been taken under the above Act, one of which exceeded the limit of 30 grains per 100,000. A second sample was taken from the same source, and upon analysis found to be just below the limit.

Fertilizers and Feeding Stuffs.

During the year 19 samples of Fertilizers and Feeding Stuffs were purchased and submitted for Analysis, 9 of which were genuine, 4 were not genuine, but with extenuating circumstances, in 5 cases the samples were sold without a label stating the percentage and other ingredients, as required by the Act. In each case the seller was notified of the omission, also the manufacturer if the name and address could be obtained.

Disinfection.

One thousand and forty two visits have been made in connection with infectious cases in order to make enquiry and carry out the work of disinfection. The

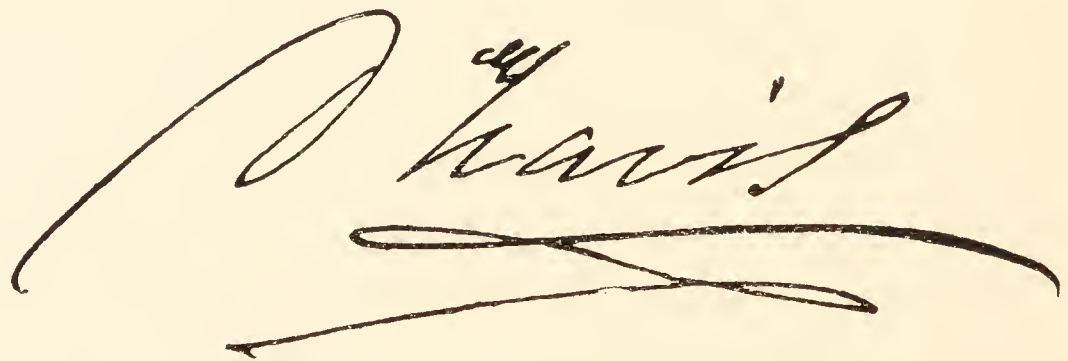
number of articles disinfected from various houses is 6,265, the number of rooms 1042, and where necessary the walls were stripped after disinfection.

Change of Staff.

Mr. E. B. Jubb, Junior Clerk, who had been in the employ of your Committee for 14 years, died March 13th, 1913, after a very short illness. His place has been filled by Mr. H. Leaper.

I have before expressed approval of the manner in which the District Inspectors have carried out their duties during the year. Personally I have to thank the Chief Clerk (Mr. J. W. Jackson) and his staff for the valuable assistance rendered me in laying before you my frequent reports.

I am, your obedient Servant,

A handwritten signature in dark ink, appearing to read "J. W. Jackson". The signature is written in a cursive style with a large, sweeping initial "J" and a long horizontal flourish extending to the right.

Chief Sanitary Inspector and
Scavenging Superintendent.

APPENDIX.

VITAL STATISTICS OF THE BOROUGH OF HALIFAX DURING 1913 AND PREVIOUS YEARS.

Year.	Population estimated to Middle of each Year.	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		Deaths of Non- residents registered in the District.	Deaths of Residents not registered in the District.	NETT DEATHS BELONGING TO THE DISTRICT			
		Un- corrected Number	Nett		Number.	Rate.*			Under 1 year of age.		At all ages.	
			Number.	Rate *					Number.	Rate per 1,000 Nett Births	Number.	Rate.*
1	2	3	4	5	6	7	8	9	10	11	12	13
1908	102,570	2118	...	20·6	1664	16·2	139	36	216	101	1561	15·2
1909	102,232	1840	...	17·9	1654	16·1	132	30	183	99	1552	15·1
1910	101,894	1860	...	18·2	1543	15·1	139	27	166	89	1431	14·0
1911	101,556	1875	1868	18·3	1631	16·0	130	53	231	123	1554	15·3
1912	101,500	1841	1828	18·0	1574	15·5	125	46	149	81	1495	14·7
1913	101,800	1876	1871	18·3	1637	16·0	132	56	193	103	1561	15·3

Table showing the number of Infectious Diseases in each locality of the Borough, notified during the year,
and classified according to age.

NOTIFIABLE DISEASES.	CASES NOTIFIED IN WHOLE DISTRICT.								TOTAL CASES NOTIFIED IN EACH LOCALITY.															Total cases removed to Hospital.	
	At all Ages.	At Ages—Years.							Orenden Ward.	Akroydon Ward.	North Ward.	Central Ward.	West Ward (W).	South Ward.	East Ward.	Southwam Ward (H).	Skircoat Ward.	Copley Ward.	Pellon Ward.	Kingston Ward.	Ilingsworth Ward.	Northwam Ward.	Warley Ward.		
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.	65 and upwards.																	
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria including Membranous Croup ...	111	2	23	57	18	10	1	...	7	2	2	3	13	3	1	24	28	1	5	21	1	...	...	62	
Erysipelas	57	...	1	2	5	16	24	9	4	3	12	2	7	2	4	3	5	1	5	6	2	...	1	1	
Scarlet Fever	109	2	26	72	7	2	...	...	5	15	3	5	6	14	3	4	8	7	7	21	2	2	7	48	
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Enteric Fever	16	...	...	2	5	7	...	2	1	...	...	...	2	1	1	4	2	...	2	1	1	1	...	12	
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Puerperal Fever	3	...	...	...	...	3	...	...	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	
Cerebro-spinal Meningitis	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	
Poliomyelitis	1	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Pulmonary Tuberculosis	173	3	4	10	39	70	42	5	15	11	18	16	29	10	17	9	11	3	7	9	13	3	2	68	
Other Forms ..	113	...	15	47	13	20	15	3	7	7	9	11	13	12	17	10	8	...	7	7	1	4	...	...	
TOTALS	584	8	69	190	87	128	83	19	39	40	44	38	70	42	43	55	62	12	33	66	20	10	10	191	



Causes of, and Ages at Death, during the Year 1913.

CAUSES OF DEATH.				DEATHS IN OR BELONGING TO WHOLE DISTRICT.								Total Deaths in Public Institutions in the District.	
				AT SUBJOINED AGES.									
				At all Ages.	Under 1	1 to 2.	2 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.		65 and upwards.
All Causes { Certified ...				1550	190	48	35	56	59	180	454	528	
{ Uncertified ..				11	3	...	...	...	...	...	2	6	
Enteric Fever				7	...	...	...	...	1	4	...	2	4
Smallpox				...	...	...	...	...	...	...	...	...	...
Measles				9	...	7	2	...	...	...	...	...	...
Scarlet Fever				1	...	1	...	...	...	...	...	...	...
Whooping Cough				5	4	...	1	...	...	...	...	...	...
Diphtheria and Croup				20	1	1	5	13	...	...	...	...	15
Influenza				8	...	...	...	...	...	4	2	2	...
Erysipelas				2	...	...	...	...	1	...	...	1	1
Phthisis (Pulmonary Tuberculosis)				102	...	1	...	3	25	41	26	6	50
Tuberculous Meningitis				12	1	3	2	5	1	...	...	...	4
Other Tuberculous Diseases				38	4	4	4	5	5	10	5	1	16
Cancer, Malignant Disease				143	...	...	...	...	...	13	89	41	48
Rheumatic Fever				4	...	...	...	2	...	...	...	2	1
Meningitis				16	4	1	2	2	1	3	3	...	2
Organic Heart Disease				145	1	...	...	1	5	17	58	63	25
Bronchitis				147	10	4	3	1	...	2	35	92	29
Pneumonia (all forms)				113	20	11	5	6	3	10	36	22	18
Other Diseases of Respiratory Organs				24	1	1	1	..	1	6	9	5	4
Diarrhoea and Enteritis				50	26	8	3	1	...	1	5	6	5
Appendicitis and Typhlitis				5	...	...	...	3	1	1	...	...	8
Cirrhosis of Liver				7	...	...	...	...	...	...	6	1	1
Alcoholism				3	...	...	...	...	...	...	2	1	1
Nephritis and Bright's Disease				77	1	...	1	2	3	11	44	15	14
Puerperal Fever				1	...	...	...	...	...	1	...	...	...
Other Accidents and Diseases of Pregnancy and Parturition				9	...	...	...	...	2	7	...	...	1
Congenital Debility and Malformation, including Premature Birth				56	56	...	...	...	...	...	...	...	2
Violent Deaths, excluding Suicide				29	...	2	1	2	4	7	8	5	26
Suicides				19	...	...	...	...	1	3	11	4	7
Other Defined Diseases... ..				503	62	4	5	10	5	39	115	263	149
Diseases Ill-defined or Unknown				6	2	...	...	...	...	...	2	2	5
All Causes				1561	193	48	35	56	59	180	456	534	436



INDEX OF CONTENTS.

A

	PAGE
Acidity of Water	77
Analysis of Food Adulteration	129
Analysis of Refuse	160
Anthrax... ..	72-73
Area and Population of the Borough	7-9
Ashpits	154
Average Age at Death in Age Periods	23
Average Number of Persons per House	6

B

Bakehouses	91-92
Birks Hall Tips	159
Births	11-17
Birth-rate Average for 10 years	6
Birth-rates in Quinquennial Periods	13
Birth-rates of Wards	16
Births and Birth-rates in each Quarter	15
Births, Illegitimate	14
Births, Stillborn	17
Borough Fever Hospital	104-106

C

Canal Boats	165
Cancer	73-74
Do. Organs affected	74
Cases of Infectious Diseases Notified in each Ward	38
Do. do. do. Public Institutions	38
Causes of Death	42
Causes of Death of Illegitimate Children... ..	30
Causes of Death of Infants under 1 year	28-29
Classification of the Causes of Death from Infectious Diseases, and Ages at Death in Age Groups	Appendix
Common Lodging Houses	82
Comparison of Ward Death-rates	35-37

D

Dairies, Cowsheds and Milkshops	...	...	114-123
Death-rate in Periods	...	...	20
Do. England and Wales	...	...	21
Do. Each Ward	...	...	21
Do. Wards for 5 years	...	...	22
Deathrate of each sex in the Borough	...	...	23
Deaths outside the Borough	...	...	19
Deaths and Death-rate Averages for 10 years	...	...	6
Deaths in Institutions	...	...	18
Detailed List of Workshops in the Borough	..	...	90
Diarrhoea and Enteritis	...	...	50-51
Diphtheria	...	...	46-49
Do. Cases and Deaths	...	...	47
Disinfection	...	...	95-96

E

Erysipelas	...	...	49
Excess of Births over Deaths	...	...	12

F

Factories and Workshops	...	...	82-90
Fertilisers and Feeding Stuffs' Act	...	...	138
Fever	...	...	44-46
Food Condemned and Destroyed	...	...	125-126
Furnished Rooms, Houses Let in Lodgings,	...	...	97-98

G

Goux Scavenging...	...	...	155-157
--------------------	-----	-----	---------

H

Health Committee	...	...	3
Height above Sea Level	...	...	6
House to House Inspection under Town Planning Act	...	...	98-100

I

Ice Cream Makers and Vendors	...	...	92-93
Infant Mortality	...	...	26-34
Infected Houses Visited	...	...	162
Illegitimate Births	...	...	6
Infectious Diseases Removed to Fever Hospital	...	...	163
Influenza	...	...	51
Inquests and Uncertified Deaths	...	...	75
Inspection of Cattle	...	...	118-123
Introductory Remarks	...	...	4-5

INDEX.

iii.
PAGE

L

Lady Health Visitors' Report ...	109-113
Latitude of Station...	6
Longitude of Station	6

M

Malignant Disease, Death-rate	75
Marriages	9-11
Do. Where Solemnized	11
Measles ...	49
Meteorology	100-102
Do. Summary of Meteorological Observations...	100a
Miscellaneous Matters	102-104

N

Night Scavenging ...	153
Notification of Births' Act	106-108
Notification of Infectious Diseases	37-41

O

Offensive Trades	93
------------------	----

P

Periodical Tables of Infectious Diseases	39-41
Persons per Acre in Wards	6
Phthisis...	53-68
do Seat of Disease	57
do Cause of Disease	61
do Occupations—Males and Females	60
do Chemical and Bacteriological Examinations	68
do Non-Insured Persons	68-69
do Insured Persons	69-70
do General Results	71
Population	6
Population Census	6
Privy Middens	80
Prosecutions under Sale of Food and Drugs' Act	166-167
Public Health Association	107-108
Public Health Laboratory	94-95

R

Rainfall...	101-102
Rateable Value of Borough	6
Rag Flock Act	137
Refuse Manipulator	82
Registered Midwives	113

	PAGE
Removal of Nuisances	149-152
Respiratory Diseases	51-53
Do. do. Comparative Table of Deaths ...	52-53

S

Sale of Food and Drugs' Act	128-138
Samples of Food, &c. Analysed	129
Sanitary Defects in Workshops	84-87
Sanitary Inspector's Report	147-170
Scarlet Fever	43-44
Scarlet Fever and Diphtheria in Schools ...	97
Scavenging, Disposal of Night Soil and House Refuse	79-82
Schools and Infectious Diseases	97
Sewerage and Drainage	78-79
Shop Inspector's Report	139-146
Shops Closing Hours	142
Slaughterhouses	124-127
Smallpox	42-43
Smoke Observations	161-168
Staff, Health Department	2
Streets Scavenging... ..	157-160

T

Total Rainfall in Borough	6
Town Planning	169
Tubercular Diseases, Death-rate	55
Typhoid Fever	45
Do. Cases Notified 1899-1913... ..	46

V

Vans Occupied as Dwellings	168
Veterinary Inspectors' Report... ..	114-127
Vital Statistics of the Borough	Appendix
Vital Statistics, Summary of	6

W

Water Closets	80
Water Supply	76-78
Whooping Cough	49

Z

Zymotic Death-rate	24
Do. England and Wales	24
Do. In each Ward	25

